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Via E-Mail and U.S. Mail

Darren Bradford
California Regional Water Quality Control
Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
dbradford@waterboards.ca.gov

Re: Comment-Revised Tentative Order No. R9-2013-0007, Place ID: 785677

Dear Mr. Bradford:

On behalf of the Surfrider Foundation, Natural Resources Defense Council, Endangered Habitats League, Sierra Club, California State Parks Foundation, Sea and Sage Audubon Society, Laguna Greenbelt, Inc., Audubon California, California Coastal Protection Network, Defenders of Wildlife, WiLDCOAST-COSTASALVAjE, and Orange County Coastkeeper (collectively, "Coalition"), we request that the San Diego Regional Water Quality Control Board ("Water Board" or "Board") deny the application for waste discharge requirements submitted by the Foothill/Eastern Transportation Corridor Agency ("TCA") for the Tesoro Extension.

Since the Water Board's last hearing on the application, TCA has continued its illegal attempt to piecemeal the environmental review of the Foothill South Toll Road ("Foothill-South") by proceeding with the first segment of the project—the Tesoro Extension—while ignoring the remainder. Without any meaningful public notice, TCA convened a special meeting to formally approve the Tesoro Extension, despite its failure to prepare a supplemental environmental impact report ("SEIR") for the project as required by the California Environmental Quality Act ("CEQA"), Public Resources Code

§ 21000 et seq. This action is now being challenged in court by members of the Coalition and by the California Attorney General.

The Water Board should not follow TCA's illegal course. CEQA's general limitation on a responsible agency's discretion to require environmental review beyond that performed by the lead agency does not apply where, as here, the question is whether new conditions or circumstances require supplemental environmental review.

But regardless, the Board has independent authority to disapprove the project under the Porter-Cologne Water Quality Control Act, Water Code § 13000 et seq. The Water Board disapproved TCA's WDR application for the Foothill-South in 2008, and if anything, the circumstances today even more strongly compel denial.

Moreover, the Board may not approve the project unless it makes independent findings under CEQA that the project's significant impacts are either mitigated or are justified by overriding considerations. (Cal. Code Regs., tit. 14, § 15000 et seq. ("CEQA Guidelines"), § 15096(h).) The record before the Board provides no basis for making such findings. Nor can the Board seek guidance from TCA's 2006 findings, which are outdated, not supported by substantial evidence, and apply only to the Foothill-South as a whole.

Even if the Tesoro Extension were viewed in isolation, the information that has been provided to the Board regarding the project's impacts to waters is not sufficient for the Board to issue WDRs. Critical components of the analysis of the project—such as updating the Runoff Management Plan ("RMP") in accordance with County hydromodification requirements, and subjecting the proposed Habitat Mitigation and Monitoring Plan ("HMMP") to public review and comment—are required before the scope of the project's impacts to waters can be known. This analysis must be completed *before* a decision is made on WDRs, not after.

Finally, TCA has gone out of its way to obstruct public review of its efforts to move forward with the Tesoro Extension, consistently refusing to make its documents available to the public in a timely fashion and failing to provide a public review process for the project despite repeated promises to do so. At a minimum, the Water Board should defer action on the proposed Revised Tentative Order ("Order") and Report of Waste Discharge ("ROWD") until key documents, such as the updated RMP and the final HMMP, have been circulated for public review and comment.

I. The Board Should Require a Supplemental EIR for the Project.

As we have discussed at length in our prior letters, CEQA requires that a responsible agency prepare an SEIR for a project where substantial changes are proposed in the project which will require major revisions of the prior EIR, substantial changes occur with respect to the circumstances under which the project is being undertaken, or new information on environmental impacts becomes available. (Pub. Resources Code § 21166; CEQA Guidelines § 15162.)

Here, the project is the Foothill-South project approved by TCA in 2006—a six-lane highway that would have extended State Route 241 through 16 miles of virtually undeveloped lands in one of the most environmentally sensitive areas in California. The approvals of the Foothill-South and the underlying EIR ("2006 EIR") were challenged on CEQA grounds in a lawsuit brought by members of the Coalition, and in a similar suit brought by the State Park and Recreation Commission and the Attorney General. Two years later, the California Coastal Commission held that the Foothill-South was inconsistent with the Coastal Zone Management Act of 1972 ("CZMA"), 16 U.S.C. § 1451 et seq., a decision which was upheld by the U.S. Secretary of Commerce in December 2008.

In the face of this decision, TCA decided to simply proceed with the first segment of the project without indicating how it would resolve the CZMA conflicts for the remainder of the alignment. In February 2013, TCA prepared an Addendum to the 2006 EIR for the first 5.5 miles of the Foothill-South, which it dubbed the "Tesoro Extension." This literal "road to nowhere" terminates at a dirt road and purports to serve a development, the future Rancho Mission Viejo, that already includes a north-south road that is more than adequate to serve the projected traffic. The Addendum does not address the location or impacts of the remainder of the Toll Road, nor does it contain a detailed or updated environmental analysis of the Tesoro Extension. Rather, it simply concludes that the impacts of the Tesoro project will not be significantly greater than the impacts of the entire 16-mile Toll Road analyzed in the 2006 EIR.

The Addendum's artificially truncated analysis ignores the serious and controversial environmental constraints to constructing the southern portion of the route. For example, in a clear attempt to evade Army Corps permitting, the Tesoro Extension segment stops just short of San Juan Creek and the San Juan Creek complex's valuable jurisdictional wetland resources. TCA's use of a segmented project description also sidesteps the significant impacts on water quality, wetlands, and coastal zone and park resources resulting from the Foothill-South alignment or the other far-eastern alignments.

Once TCA goes forward with the remainder of the alignment, however, as it has repeatedly indicated it will, impacts to these resources are inevitable.

The 2008 determination by the Secretary of Commerce that the Foothill-South is inconsistent with the CZMA, and thus that the alignment approved by TCA in 2006 is no longer feasible, represents a substantial change in circumstances requiring preparation of an SEIR. In addition, the 2006 EIR is now entirely outdated. To give just one example, its water quality analysis is primarily based on a 2003 Runoff Management Plan, as well as obsolete versions of other documents, such as the California Storm Water BMPs and the Storm Water Quality Handbooks.[1] These documents are not only out-of-date, they were flawed from the beginning. As the Water Board informed TCA in denying its WDR application in early 2008, the 2003 RMP had numerous deficiencies and "was not adequate to demonstrate that the project would not cause degradation of receiving waters."[2]

Despite the fact that the 2006 EIR is clearly outdated, TCA failed to prepare an SEIR. It also failed to recirculate the 2006 EIR for public review as CEQA requires when a lead agency approves a separate, later project based on a prior EIR. (CEQA Guidelines, § 15153(b)(2).) Instead, on April 18, 2013, TCA—at a special meeting convened only 48 hours before the meeting was held—approved the Tesoro Extension based on the abbreviated and inadequate Addendum and determined that no SEIR was required. TCA's decision has been challenged in two new lawsuits, one filed by members of the Coalition, and another by the California Attorney General.[3] In

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[1] *See* 2006 EIR, 4.9-1 ("The potential impacts of the SOCTIIP Alternatives on water quality are evaluated in detail in the Runoff Management Plan (RMP, Psomas, 2003) and are summarized in this Section.").

[2] J.H. Robertus, Regional Water Quality Control Board, Letter to R. Beck, RBF Consulting, Re: South Orange County Transportation Infrastructure Improvement Project Foothill-South Toll Road (Feb. 6, 2008) ("2008 Water Board Denial") (attached as Exhibit A).

[3] The petitions in *California State Parks Foundation et al. v. Foothill/Eastern Transportation Corridor Agency et al.*, San Diego Superior Court Case No. 37-2013-00049797-CU-WM-NC (filed May 22, 2013) and *People ex rel. Attorney General Kamala Harris v. Foothill/Eastern Transportation Corridor Agency et al.*, San Diego Superior Court Case No. 37-2013-00050001-CU-WM-NC (filed May 23, 2013) are attached as Exhibits B and C, respectively.

addition, the reinstatement of the litigation challenging the original 2006 EIR has been initiated.

The Revised Tentative Order appears to assume that, now that TCA has decided to proceed with the project without preparation of an SEIR, the Water Board, as a responsible agency, is bound by that decision. But this is not the case, where, as here, changed circumstances and conditions require an SEIR under CEQA. A responsible agency has independent authority under CEQA to determine whether the conditions requiring preparation of an SEIR have been met. (CEQA Guidelines, § 15050(c)(2) (lead agency determination not conclusive where conditions for SEIR are met); *see also id.,* § 15096(e)(3).)

Here, as discussed above and in our prior letters, the project is the entire Foothill-South, and substantial changes in circumstances have occurred since TCA's approval of the EIR for the Foothill-South project in 2006. The Board should require preparation of an SEIR to ensure that it has a full and complete picture of the environmental implications of its approval.

II. The Water Board Has Independent Authority to Deny TCA's Application Based on the Impacts of the Foothill-South Project on Waters in the State.

Even if the Water Board were bound by TCA's improper determination to proceed with the project without preparing an SEIR, the Board has independent authority to deny the application under the Porter-Cologne Act based on the impacts of the Foothill-South project as a whole. Moreover, the Water Board is independently required under CEQA to make findings regarding the project's significant impacts before it can approve the application. The only impacts described in the CEQA documents submitted by TCA are the impacts of the Foothill-South as a whole, and there is no evidence that TCA has fully addressed the inadequacies in the water quality mitigation for this project previously identified by the Water Board. On these grounds, the Water Board—as it did in 2008—should deny TCA's application.

A. TCA Has Failed to Ensure Adequate Protection to Water Resources Under the Porter-Cologne Act.

The Water Board has a statutory responsibility "to protect the quality of waters in the state from degradation." (Water Code, § 13000.) In reviewing waste discharge requirements, the Board is entitled to all "data and information necessary to enable the board to determine whether the project proposed may have a significant effect on the environment." (Cal. Code Regs., tit. 23, ("23 CCR"), § 3740.) The Board may

also request further information from TCA in order to "clarify, amplify, correct, or otherwise supplement the contents of a complete application in order for the certifying agency to determine whether a certification should be issued." (23 CCR § 3836.) The Board has the authority to "prohibit, postpone, or condition the discharge of waste" where this information has not been submitted or where it fails to ensure "long-term protection of water resources." (23 CCR § 3742.)

The Board's regulations further require that the applicant submit "a full, technically accurate description, including the purpose and final goal, of the *entire activity*." (23 CCR § 3856(b) (emphasis added); *accord* CEQA Guidelines, § 15378(c) ("project" means the whole of the "activity which is being approved" and not "each separate government approval").) It is clear that the "entire activity" here is and has always been construction of the Foothill-South. As discussed in our prior letters, there is no utility in constructing the Tesoro Extension independent from the Foothill-South, and in any event, TCA's repeated statements show that the project's only purpose is to further completion of the entire Foothill-South. Moreover, TCA's improper determination regarding the scope of its review under CEQA—even if it were binding on responsible agencies for CEQA purposes until it is overturned in court—does not bind the Water Board in the application of its independent authority under the Porter-Cologne Act to ensure protection of water resources. (Water Code, §§ 13263, 13241.)

Here, the record has always shown that the impacts of the Foothill-South project will be devastating, and some of the most significant impacts are on water quality and wildlife. Among other things, the Project would:

- Adversely impact important habitat for eleven threatened or endangered species, including the endangered arroyo toad, the southernmost known population of the endangered steelhead trout, and the endangered tidewater goby.

- Threaten the water quality of affected watersheds and the coastal waters to which they drain, including the world-class surfing beach known as Trestles.

- Cause the permanent loss of wetlands, including wetlands associated with San Mateo Creek—one of the last remaining high-integrity watersheds along Southern California's coast—and degrade the creek and its estuary through erosion.

- Destroy over 50 acres of undisputed environmentally sensitive habitat areas.
- Cause erosion and fine sediment delivery to the lagoon at the San Mateo Creek mouth that has the potential to change its ecology and adversely impact habitat for the tidewater goby.
- Require 41 million yards of cut and fill.
- Result in major impacts to runoff patterns in 20 individual subwatersheds, most of which are fragile and prone to instability and rapid degradation, that currently have little development or and related impervious area and include steep terrain and drainage channels which are very sensitive to increased runoff.
- Discharge toxic roadway pollutants and sediment into miles of waterways that are presently pollution free.[4]

Even TCA has recognized that the project would have numerous significant and unavoidable impacts on water resources and sensitive species, including impacts related to sensitive plant communities; habitat fragmentation and wildlife movement; cumulative impacts to wildlife, fisheries, and vegetation; and impacts to the arroyo toad and California gnatcatcher.[5]

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[4] *See* Coalition Letter to Chairman Patrick Kruer, California Coastal Commission, Re: Foothill Transportation Corridor-South (San Onofre State Beach): Opposition to Coastal Consistency Certification (CC-018-07) (January 17, 2008), and Philip Williams & Associates, Ltd. Letter to Chairman Patrick Kruer, California Coastal Commission, Re: Response to TCA comments on PWA watershed analysis (January 17, 2008) cited therein (attached as Exhibit D); Coalition Letter to Thomas Street, NOAA Office of General Counsel for Ocean Services, Re: Comments on Appeal of Foothill/Eastern Transportation Corridor Agency Pursuant to the Coastal Zone Management Act (May 28, 2008), and selected exhibits (attached as Exhibit E).

[5] *See* TCA Resolution No. F2006-02 (February 23, 2006), Attachment A: Findings, Facts in Support of Findings and Statement of Overriding Considerations Regarding the Subsequent Environmental Impact Report for the SOCTIIP ("2006 Findings") at 29–63.

The Coastal Commission, in denying TCA's consistency certification, also expressed grave concerns about the project's water quality analysis, based in part on the Water Board's concerns. With regard to pollution impacts, for example, the Staff Report finds:

> Although BMPs are the basis for a national strategy to reduce the impacts of stormwater and nonpoint source pollution, they are not 100% effective. According to the Caltrans BMP Retrofit Pilot Program Final Report (CTSW-RT-01-050), also cited by TCA, the proposed sand media filters can be expected to trap about 90% of suspended sediment, 87% of total lead, and 50% of copper. The proposed detention basins fare even worse trapping only 72% of suspended sediment, 72% of total lead, and 58% of total copper. In other words, the proposed toll road will discharge between 42- 50% of the copper, 13- 28% of the lead, and 10- 28% of the suspended sediment generated from automobiles into the San Mateo Creek, San Juan Creek, and San Onofre Creek watersheds. Clearly, the heavy metal impacts would not be completely mitigated. Considering that no toll road currently exists through San Mateo Creek watershed, nor in the watersheds on either side of it, this project will increase discharges of heavy metals and other automobile-generated pollutants into the upper parts of the watersheds . . . .[6]

Commission staff also found that the baseline and proposed monitoring were insufficient to ensure protection of water quality:

> The Coastal Commission finds that given the risk associated with this project to biological productivity and water quality associated with this project a comprehensive monitoring program for those resources is required. The monitoring plan should enable TCA and others to evaluate the current hydrologic, biological productivity and water quality baselines and monitor changes to those resources caused by

[6] California Coastal Commission, Adopted Staff Report and Recommendation on Consistency Certification (Feb. 13, 2008) (excerpts) at 199 (attached as Exhibit F).

> the project. In addition, a contingency plan is required that proposes corrective actions that will be taken if the proposed project is shown to have adverse impacts on the hydrologic functions, biological productivity or water quality of the San Mateo, San Juan or San Onofre watersheds based on the comprehensive monitoring plan.[7]

The Water Board independently denied the waste discharge application for the Foothill-South in 2008 based on its determination that the project had the potential to degrade local receiving waters. TCA has never resolved the serious deficiencies the Water Board identified in its 2008 water quality analysis.

Until TCA can provide adequate and updated information about the environmental impacts of the *entire activity*—the Foothill-South—the Water Board should deny TCA's application for the same reasons it denied TCA's prior application in 2008.

B. There Is No Basis On Which the Board Can Make the Findings Required by CEQA.

Even if the Board were bound by TCA's decision not to prepare an SEIR prior to its approval of the Tesoro Extension, the Board has an independent duty to consider all the environmental impacts of the proposed project, ensure appropriate mitigation for impacts within its jurisdiction, and identify overriding considerations for any impacts that are not mitigated before it can approve the project. Because the Board is not bound by TCA's findings on these matters, and because there is no basis for making these findings on the present record, the Board should deny TCA's application.

As a responsible agency, the Water Board has responsibility for mitigating or avoiding "the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve." (CEQA Guidelines, § 15096(g)(1); *accord id.,* § 15096(g)(2) (a responsible agency "shall not approve a project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment.").)

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[7] *Id.* at 215.

The Board must also adopt findings pursuant to Guidelines section 15091 for *each significant environmental impact* identified in the lead agency's EIR. *Id.,* § 15096(h). Section 15091 provides:

> *No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project* unless the public agency makes one or more written findings *for each of those significant effects*, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
>
> (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
>
> (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
>
> (3) Specific economic, legal, social, technological, or other considerations . . . make infeasible the mitigation measures or project alternatives identified in the final EIR.

(CEQA Guidelines, § 15091(a) (emphasis added).) In addition, the Board must adopt a statement of overriding considerations for any significant and unavoidable impacts and a mitigation monitoring plan setting forth mitigation that is "fully enforceable through permit conditions, agreements, or other measures." (*Id.,* §§ 15093, 15091(d).) In making these findings, the Board does not defer to the findings of the lead agency, but rather "must…issue its *own* findings." (*Riverwatch v. Olivenhain Mun. Water Dist.* (2009) 170 Cal.App.4th 1186, 1201.)

Even overlooking the deficiencies of the 2006 EIR and recent Addendum that are now being challenged in court, the record makes clear that the project will have numerous significant and unmitigable impacts. The 2006 EIR found that the Foothill-South project would have impacts that are too numerous to summarize here, but some of the most significant relate to impacts on sensitive plant communities, habitat

fragmentation, fisheries, endangered species, and erosion and sedimentation of local creeks, and wetlands.[8]

TCA's recent Addendum provides no basis for the Water Board to limit its CEQA findings to the impacts of the Tesoro Extension. The Addendum does not even purport to analyze the environmental impacts for the Tesoro Extension standing alone. Rather, it merely concludes after the most cursory analysis that the "Tesoro Extension Project would not result in significant individual or cumulative effects not discussed in the Final SEIR."[9] Thus, the Addendum itself relies entirely on the impacts of the entire Foothill-South project as its benchmark. In the absence of any analysis by TCA of the significance of the Tesoro Extension's impacts standing alone, the Water Board has no choice but to base its CEQA findings on the full range of impacts described in the 2006 EIR.

As discussed above, the Foothill-South would have extensive significant and unavoidable impacts on water resources, habitat and protected species. TCA has also found that the Foothill-South would have potentially significant impacts on a wide range of resources that are within the Water Board's jurisdiction, including adverse impacts to

- peak flow rate and runoff volumes for local drainage areas;
- floodplain encroachments;
- encroachment impacts on local creeks;
- impacts to natural and beneficial floodplain values;
- groundwater recharge;
- increases in sediment loads;
- channel scouring and sediment deposition;
- erosion and sedimentation of local creeks;
- surface and ground water quality;

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[8] *See generally* 2006 EIR; *see also* 2006 Findings.

[9] *See, e.g.*, Addendum at 3-13 (hydrology and water quality analysis).

- direct and cumulative impacts to state and federally protected wetlands;
- conflicts with local ordinances and local, regional and State habitat conservation plans;
- short- and long-term impacts to numerous sensitive and protected plan and animal species; and
- impacts on the coastal zone.[10]

The Water Board must then adopt findings for each of these significant impacts indicating either that the impact has been mitigated, or that mitigation is infeasible or outside the Board's jurisdiction. The Board is responsible for mitigating or avoiding all significant impacts resulting from its approvals of the project that are within the scope of its authority. (CEQA Guidelines, §§ 15096(g), 15096(h).) This requires that the Board develop specific permit conditions, based on current and complete information, to mitigate each significant impact on water and water-related resources identified in the 2006 EIR.

For the reasons already identified by the Water Board in denying TCA's application in 2008, these findings cannot be made. Indeed, the Addendum relies on the very same water quality mitigation measures that the Board found inadequate in 2008.[11] Nor can the Water Board rely on TCA's findings, as TCA adopted no mitigation findings

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[10] *See* 2006 Findings at 140–68.

[11] *See* 2008 Water Board Denial at 7–8 (criticizing mitigation measures WQ-5, WQ-6, 10b, 10c, 10d, and 10f); 2006 EIR, 4.9.33-34 (explaining that measures 10b, 10c, 10,d and 10f have been incorporated into Project Design Features ("PDFs") 9-4, 9-5, 9-1 and WQ-3, respectively); Addendum, Appendix A, at 18–19 (incorporating mitigation measures WQ-3, WQ-5 and WQ-6), 37–38 (incorporating PDFs 9-1, 9-4, and 9-5).

under CEQA Guidelines section 15091 for the Tesoro Extension[12] and its 2006 Findings are both outdated and fundamentally inadequate.[13]

Finally, the Board is required to make findings of overriding considerations justifying approval in light of the significant impacts remaining after mitigation. Not surprisingly, the only override findings TCA has ever adopted are for the Foothill-South *as a whole*.[14] TCA's findings (which like the other required CEQA findings do not bind the Board) are deficient for numerous reasons, but in any event cannot stand in light of the 2008 decision by the Coastal Commission, upheld by the Secretary of Commerce, that the Foothill-South contravened numerous enforceable policies of the State's Coastal Management Program.

In addition, the benefits and environmental impacts of the Tesoro Extension alone are significantly different from those of the full Foothill-South. For example, in approving the Foothill-South in 2006, the "benefits" that TCA found would outweigh the Project's substantial environmental impacts all assumed the construction of the entire Toll Road. These benefits included traffic relief resulting from connecting State Route 241 to I-5, the installation of water treatment systems at Trestles beach, and the creation of "an additional evacuation route from I-5, immediately south of San Clemente, to Ortega Highway and to State Route 241."[15]

None of these claimed benefits will be realized by the proposed Tesoro Extension. Despite its substantial environmental impacts, the Tesoro Extension will achieve only the most nominal traffic improvements. In fact, TCA previously rejected an

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[12] Tellingly, in approving the Tesoro Extension, TCA did not adopt any findings under CEQA Guidelines sections 15091 or 15093. (*See* TCA Resolution No. 2013F-005 (April 18, 2013).) TCA's reliance on its 2006 findings for the Foothill-South is further indication that the entire Foothill-South is the project.

[13] *See* William J. White, Shute, Mihaly & Weinberger, Letter to Macie Cleary-Milan, Foothill-Eastern Transportation Corridor Agency, Re: Comments on Final SEIR and Related Findings for the SOCTIIP Project (January 12, 2006) and selected exhibits. (attached as Exhibit G).

[14] TCA did not adopt any findings under CEQA Guidelines section 15093 identifying overriding considerations that would justify Tesoro as a stand-alone project. (*See, supra*, fn. 12.).

[15] 2006 Findings at 250–51.

alternative similar to the Tesoro Extension, the Far East Corridor-Ortega Highway Variation (FEC-OHV), as infeasible on the grounds that it performed poorly for the traffic measures because it did not "provide a connection to I-5" and the "high cost per hour of travel time saved" did not justify the expenditure of resources.[16]

Because there is no basis for the Board to make the findings required by CEQA on the current record, the Board should deny TCA's application.

III. The Board Should Deny the Application Even If the Tesoro Extension Could Be Considered Standing Alone.

Even if the Tesoro Extension could be considered apart from the impacts of the Foothill-South, the documents before the Board are not adequate to ensure that the proposed 5.5 miles of new freeway will not significantly degrade regional water quality. Even in the very limited review period provided by the Board's May 30 Notice of Continuance of Hearing, we have been able to identify a number of critical flaws in the studies underlying TCA's permit application.

As explained in the June 7, 2013 comment letter from ESA/PWA, until the RMP is updated, the impacts of the Tesoro Extension on receiving waters, and whether those impacts can be mitigated, is unknown. As currently proposed, the project would fill in several headwater channels, potentially leading to a reduction in sediment to receiving streams. In order to comply with the HMP, the site design may need to be significantly altered, including changes to fill discharge locations, changes to the size and location of stormwater best management practices, and changes to grading footprints. The Water Board cannot evaluate these potential changes until TCA undertakes the required analyses.[17] Moreover, the hydromodification facilities and other design changes that may be required to mitigate those impacts may themselves have impacts on habitat or other resources that cannot be known until those facilities or changes are identified.

The Order recognizes the inadequacy of the existing RMP. It provides that TCA shall "update the RMP" to be in conformance with the statewide storm water NPDES permit for the California Department of Transportation (Caltrans), Order No.

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[16] 2006 EIR, ES-31.

[17] *See* Andrew Collison, PhD., Senior Fluvial Geomorphologist, ESA PWA, Letter to Michael Fitts, Endangered Habitats League, Re: Review of Revised Tentative Order for the Tesoro Extension (June 7, 2013).

2012-0011-DWQ, NPDES No. CAS000003, to "provide for the capture and treatment of the 85th percentile, 24-hour storm event from 100 percent of the added impervious surfaces," and to comply with the draft Model Water Quality Management Plan for South Orange County and the draft South Orange County Hydromodification Plan (HMP). (Order at 14.)

The Order also recognizes that other critical plans and mitigation are currently inadequate. For example, it provides that TCA "shall develop a monitoring program to assess effects of the project on the physical, chemical, and biological integrity of receiving waters," as well as "final maintenance plans for the vegetated swales." (Order at 15, 21.)

Another central component of TCA's application—the Habitat Mitigation and Monitoring Plan—is also deferred to future consideration. The Order currently provides for an official 30-day public comment period for the Final HMMP:

> Following receipt of a complete [HMMP], containing the information required under section VII.B. of this Order, the HMMP will be posted on the San Diego Water Board website and released for public review and comment for a minimum of 30 days. Based on the timely comments received, the San Diego Water Board Executive Officer will determine whether to hold a public hearing for San Diego Water Board consideration of the HMMP.

(Order at 18.) Although a document entitled "Final Habitat Mitigation and Monitoring Plan" is now available on the Water Board's website, the Board has not indicated whether it contains the information required under section VII.B of the Order, nor has it noticed a 30-day public review period for the document. The 2012 Biological Assessment for the Tesoro Extension, referenced in the Addendum, has also never been circulated for public review.

Now is the time to ensure that this project is properly designed and all water quality impacts are fully mitigated. It simply makes no sense for Board to consider approving this project before the final site design and project footprint are finalized. Once the project is approved and moves forward, it will be difficult or impossible to implement any necessary changes.

Approving TCA's application before critical plans and mitigation have been finalized violates both the Board's own regulations and CEQA. (*See* 23 CCR §

3742 (Board must "minimize adverse environmental impacts on water resources"); CEQA Guidelines, § 15126.4(a)(1)(B) ("Formulation of mitigation measures should not be deferred until some future time."); *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 669–71 (critical mitigation cannot be deferred until after project approval).) Because final and complete copies of these plans and programs are necessary to ensure adequate water quality protection and mitigation under the Porter-Cologne Act, as well as under CEQA, any approval of the project before the Water Board has reviewed such plans and found them adequate is premature.

IV. The Public Has Been Denied Adequate Review of this Project.

Public participation is at the heart of California's environmental protection laws. The regional water boards, for example, are directed to ensure "fair, timely, and equal access to all participants in regional board proceedings" and to "encourage public participation and comment in the preparation and review of environmental documents." (Water Code, § 13292; 23 CCR § 3763.) Likewise, the Supreme Court has explained that "the 'privileged position' that members of the public hold in the CEQA process . . . is based on a belief that citizens can make important contributions to environmental protection and on notions of democratic decision-making. . . ." (*Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 936 (citation and internal quotations omitted).) Indeed, the entire CEQA review process is premised on the value of ongoing dialogue with the public:

> "CEQA compels an interactive process of assessment of environmental impacts and responsive project modification which must be genuine. It must be open to the public, premised upon a full and meaningful disclosure of the scope, purposes, and effect of a consistently described project, with flexibility to respond to unforeseen insights that emerge from the process." In short, a project must be open for public discussion and subject to agency modification during the CEQA process. This process helps demonstrate to the public that the agency has in fact analyzed and considered the environmental implications of its action.

(*Id.* (citations omitted)*; see also Ocean View Estates Homeowners Ass'n, Inc. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 400 ("Environmental review derives its vitality from public participation.").)

In contravention of these principles, TCA provided no meaningful public review of the Addendum or its underlying studies and reports. Pursuant to its own regulations, the responsibility to ensure adequate public participation now falls on the Water Board.

TCA has made every effort to circumvent public review of its approval of the Tesoro Extension. For example, TCA failed to hold a scoping meeting for the project, despite the fact that it is clearly of statewide, regional, or areawide significance. (Pub. Resources Code § 21083.9(a)(2).) As a result, the public and affected resource agencies had no opportunity for input on TCA's initial decision to piecemeal the environmental review for the Foothill-South project.

TCA has also misled the public and environmental stakeholders regarding the opportunity for public participation. In the months leading up to the approval of the Project, TCA repeatedly assured the public that it would circulate the Addendum for public review and comment, prepare written responses to public comments, and hold a public workshop on the environmental review documents for the Tesoro Extension. Instead, TCA approved the Addendum with no public comment period and no public environmental process. Moreover, it approved both the Addendum and the Tesoro Extension at a last-minute special meeting that it called without any meaningful notice to public or to the environmental stakeholders actively involved in this issue for years.[18]

TCA also failed to solicit comments from the Water Board or other state and federal resource agencies. These agencies would normally be closely involved in preparation of the CEQA documents though scoping meetings, formal consultation, meetings, and comments. (Pub. Resources Code § 20183.9(b)(2); CEQA Guidelines, §§ 15096(b), 15096(c), 15096(d).) Formal consultation is designed to ensure that a responsible agency has CEQA documents adequate for its own later approvals by providing it the opportunity to "explain its reasons for recommending whether the lead agency should prepare an EIR," "identify the significant environmental effects which it believes could result from the project," and recommend project modifications to eliminate these effects. (CEQA Guidelines, § 15096(b).) TCA, however, never engaged

[18] *See* Peter R. Miljanich, Shute, Mihaly & Weinberger, Letter to Valarie McFall, TCA, Re: Foothill/Eastern Transportation Corridor Agency April 18, 2013 Approval of Addendum to Final Subsequent Environmental Impact Report and Conceptual Design of the Tesoro Extension (April 22, 2013) (attached as Exhibit H).

in formal consultation for the Tesoro Extension and thus short-circuited this interactive process.

As a result of TCA's actions, public and agency review of the environmental documents for the Tesoro Extension has been woefully inadequate. TCA did not even provide the Addendum to the San Diego Water Board until February 19, 2013, only a few business days prior to the close of the Water Board's written public comment period. The Water Board posted the Addendum on its own website on February 19, 2013, which was the first time the document became available to the general public.

TCA never circulated the Addendum, or any of the underlying studies, for public review and has taken no action to make these documents accessible to the public. For example, the Coalition was able to obtain the 2012 Traffic Analysis: Final Report ("Traffic Analysis") referenced in the Addendum only pursuant to a Public Records Act request. Even then TCA delayed providing a copy of the report for over a week beyond the statutorily-required deadline, and did not release it until March 12, 2013, only one day before the San Diego Water Board hearing on the matter on March 13, 2013.

In addition, critical documents referenced in the Order have not been made available for review. For example, the RMP is not available on the website of either TCA or the Water Board and has never been circulated for public review. Given that the Addendum's discussion of water quality mitigation relies almost exclusively on the RMP, public review of this document is critical to serve the purposes of CEQA. Likewise, as noted above, the Board had indicated that a "final" HMMP would be circulated for a 30-day review period—this has not occurred and should occur before the Board acts on the project, not after.

Even with regard to the upcoming Water Board hearing scheduled for June 19, the public was not informed until May 30th that the Board would accept limited additional comments. The stated June 7, 2013 deadline provided the public barely a week to prepare their submissions.

The Water Board is authorized to hold public hearings or workshops in order to "encourage public participation and comment in the preparation and review of environmental documents" for a proposed project. (23 CCR § 3763.) Given that TCA's actions to date have been aimed at evading rather than facilitating public input on its environmental documents, it now falls on the Water Board to open up this process and, for the first time, provide a formal process for public review of the Addendum and all supporting documents, including the Traffic Analysis, Runoff Management Plan,

HMMP, and 2012 Biological Assessment. If the Board does not deny the application at this time, it should refrain from taking further action until all of the critical documents have been circulated for public review and comment.

V. Conclusion

The Coalition requests that the Water Board withdraw its tentative order and the hearing thereon, and deny TCA's ROWD application based on its failure to meet water quality standards. If the application is not denied, we request, at a minimum, a public comment period and a public hearing on the Addendum and all supporting documents, including the Traffic Analysis, Runoff Management Plan, HMMP, and 2012 Biological Assessment, before any further action on the project.

Thank you for your consideration of these comments.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

for William J. White

cc (by E-mail only):
David Gibson, Executive Officer, San Diego RWQCB
James Smith, Assistant Executive Officer, San Diego RWQCB
Kelly Dorsey, Senior Engineering Geologist, San Diego RWQCB
David Barker, Supervising WRC Engineer, San Diego RWQCB
Catherine Hagan, Staff Counsel, San Diego RWQCB

Exhibits:

A: J.H. Robertus, Regional Water Quality Control Board, Letter to R. Beck, RBF Consulting, Re: South Orange County Transportation Infrastructure Improvement Project Foothill-South Toll Road (Feb. 6, 2008)

B: Petition for Writ of Mandate, *California State Parks Foundation et al. v. Foothill/Eastern Transportation Corridor Agency et al.*, San Diego Superior Court Case No. 37-2013-00049797-CU-WM-NC (filed May 22, 2013)

C: Petition for Writ of Mandate, *People ex rel. Attorney General Kamala Harris v. Foothill/Eastern Transportation Corridor Agency et al.*, San Diego Superior Court Case No. 37-2013-00050001-CU-WM-NC (filed May 23, 2013)

D: Coalition Letter to Chairman Patrick Kruer, California Coastal Commission, Re: Foothill Transportation Corridor-South (San Onofre State Beach): Opposition to Coastal Consistency Certification (CC-018-07) (January 17, 2008), and Philip Williams & Associates, Ltd. Letter to Chairman Patrick Kruer, California Coastal Commission, Re: Response to TCA comments on PWA watershed analysis (January 17, 2008)

E: Coalition Letter to Thomas Street, NOAA Office of General Counsel for Ocean Services, Re: Comments on Appeal of Foothill/Eastern Transportation Corridor Agency Pursuant to the Coastal Zone Management Act (May 28, 2008), and selected exhibits

F: California Coastal Commission, Adopted Staff Report and Recommendation of Consistency Certification (Feb. 13, 2008) (excerpts)

G: William J. White, Shute, Mihaly & Weinberger, Letter to Macie Cleary-Milan, Foothill-Eastern Transportation Corridor Agency, Re: Comments on Final SEIR and Related Findings for the SOCTIIP Project (January 12, 2006) and selected exhibits

H: Peter R. Miljanich, Shute, Mihaly & Weinberger, Letter to Valarie McFall, TCA, Re: Foothill/Eastern Transportation Corridor Agency April 18, 2013 Approval of Addendum to Final Subsequent Environmental Impact Report and Conceptual Design of the Tesoro Extension (April 22, 2013)

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EXHIBIT A

California Regional Water Quality Control Board
San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Linda Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

February 6, 2008

In reply refer to:
NWU:18-2006064.02:mmills
CIWQS Reg Msr ID no. 314915
CIWQS Plac no. 254876

Richard Beck, Regulatory Manager
RBF Consulting
14725 Alton Parkway
Irvine, CA 92618

Dear Mr. Beck:

South Orange County Transportation Infrastructure Improvement Project
Foothill-South 241 Toll Road

The California Regional Water Quality Control Board, San Diego Region (Regional Board), has reviewed your supplemental application materials for Clean Water Act Section 401 Water Quality Certification for the South Orange County Transportation Infrastructure Improvement (SOCTIIP) Project (401 no. 06C-064). Your application remains denied without prejudice for one or more of the following reasons:

- ☐ Application is incomplete and the certification time period will expire [23 CCR § 3835(b)].
- ☑ Supplemental information that was requested was still not forthcoming [23 CCR § 3836(b)].
- ☐ Final CEQA documentation is lacking [23 CCR § 3836(c)].
- ☑ The Regional Board intends to take action, but will not be able to do so within the regulatory time constraints [23 CCR § 3838(c)].

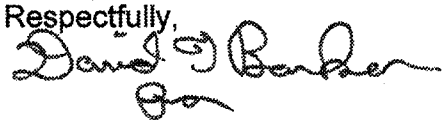
The supplemental information that was received on January 7, 2007 continues to lack sufficient information to address outstanding concerns. For instance, concerns regarding the proposed habitat mitigation plan, the runoff management plan, and water quality monitoring, continue to be insufficiently addressed in the submitted materials to date. As currently proposed, the project does not meet Water Quality Standards and therefore, would not warrant certification.

A summary of these outstanding concerns is included as Attachment 2 to this letter. Please provide complete responses to these issues in order to resume your application process. Many of these are issues that remain unresolved from our earlier comment letters. Failure to adequately address these continuing issues must be avoided. Significant progress must be made to ensure that degradation to Water Quality Standards (water quality standards include Water Quality Objectives, Beneficial Uses and the State Water Resources Control Board Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California) is avoided, minimized and/or appropriately mitigated to the extent that the project can be certified.

Denial without prejudice is done for procedural, not substantive, reasons and does not include any judgment on the technical merits of the project [23 CCR § 3831(h)]. The applicant has the option of withdrawing the application until the procedural issues have been resolved. If you wish to withdraw this 401 Water Quality Certification application, please notify the Regional Board in writing within 14 days of the date of this letter. For voluntary withdrawal or denial without prejudice, no new application fee is required if you respond within 12 months, procedural problems are fixed, and there are no significant project changes.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter. If you have any questions, please contact Mariah Mills directly at 858-627-3977 or mmills@waterboards.ca.gov.

Respectfully,



JOHN H. ROBERTUS
Executive Officer

Attachment 1: Selected Sections from California Code of Regulations, Title 23, Division 3, Chapter 28
Attachment 2: Summary of outstanding concerns

JHR:js:mkm
WDID no. 9 000001497
CIWQS Party ID no. 46197
CIWQS Reg Msr ID no. 314915

cc **[all via email]**:
Mark Durham, U.S. Army Corps of Engineers, Regulatory Branch, Los Angeles District
Maria Levario, Principal Environmental Analyst, Transportation Corridor Agencies, 125 Pacifica, Suite 100; Irvine, CA 92618
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Laura Coley Eisenberg; Rancho Mission Viejo; P.O. Box 9; San Juan Capistrano, CA 92693
William White; Shute, Mihaly & Weinberger LLP; 396 Hayes Street; San Francisco, CA 94102
Joel Reynolds; Natural Resources Defense Council; 1314 Second Street; Santa Monica, CA 90401
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Grace Pina-Garrett; NPDES Coordinator, Caltrans District 12.
Dan Silver, Executive Director; Endangered Habitats League; 8424-A Santa Monica Blvd. #592;
Los Angeles, CA 90069-4267

Attachment No. 1

§3831. Definitions.

(h) "Denial without prejudice" means an inability to grant certification for procedural rather than substantive reasons. This form of denial carries with it no judgment on the technical merits of the activity or compliance of any discharge with water quality standards. A certifying agency may reconsider a revised application package which corrects the procedural problems that caused the original denial without prejudice.

§3835. Complete, Incomplete, and Valid Applications.

(b) If an application is determined to be incomplete by the certifying agency, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the missing information, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.

§3836. Additional Information.

(b) If an application is determined to be complete by the certifying agency but supplemental information is requested by the certifying agency pursuant to Subsection (a) of this Section, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the supplemental information, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.

(c) If an application is determined to be complete by the certifying agency, but CEQA requires that the certifying agency review a final environmental document before taking a certification action, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the necessary environmental documentation, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.

§3838. Authority of Executive Director, Executive Officers, and Regional Boards.

(c) A regional board, at its discretion, may take any action its executive officer is authorized to take under Subsection (b) of this Section. If a regional board directs that a water quality certification action will be taken by that regional board, but an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the regional board can take an action, the executive officer shall deny without prejudice certification for any discharge resulting from the proposed activity before the period allowed for certification expires, unless the applicant in writing withdraws the request for certification. Such denial shall be in effect only until the regional board takes an action on the request for certification. The applicant shall not be required to submit a new application or supply an additional fee before the regional board takes an action, unless the project changes significantly in scope or potential for adverse impact and further technical review is necessary.

Attachment No. 2

Summary of concerns with the totality of supplemental information received to date.

A. *Final Runoff Management Plan State Route 241 (RMP).* Saddleback Constructors, July 26, 2007.

1. The 9/24/07 Denial without Prejudice letter noted that the RMP dismissed media filters without reviewing them to the level called for by the 2007 Caltrans Project Planning and Design Guide referred to in the RMP. Sand filters are now proposed in the San Mateo and San Onofre watersheds but not on the rest of the road alignment. Additional evaluation of media filters should be provided for the remaining road alignment. The Final Supplemental Environmental Impact Report (EIR, November 2005) p. 4.9-21 states that all BMP discharges will provide treatment in excess of the MEP threshold. TCA has not demonstrated that their project will actually meet this threshold.

2. Concerns regarding construction-phase BMPs communicated to TCA on 10/6/06, 10/18/06, 6/11/07 and 9/24/07 still have not been adequately addressed. For example, the RMP does not protect the RARE Beneficial Use in developing specific management measures for work in areas occupied by threatened and endangered species. The RMP does not address specific measures for phasing of grading and associated erosion protection for the slopes during construction.

3. Similarly, TCA did not consider the presence of sensitive species in the receiving waters, as requested in the 9/24/07 denial without prejudice letter, in their evaluation of post construction storm water discharges. The RMP should demonstrate that management measures to protect against physical and chemical degradation of receiving waters designated with the RARE beneficial use have been appropriately considered for implementation.

4. The RMP assumes Extended Detention Basins (EDBs) will capture most pollutants because Caltrans research shows that most expected pollutants are associated with particulates. Caltrans studies, however, have also noted that the expected size of particulates, with adsorbed pollutants, may not be contained in the EDB[1]. In response, TCA has increased detention time of all EDBs to 72 hours. TCA cited a 2007 Caltrans study that found that particles greater than 0.5

[1] See Grant et al. 2003. *A Review of the Contaminants and Toxicity Associated with the Particles in Stormwater Runoff.* Caltrans CTSW-RT-03-059.73.15; and Stenstrom and Kayhanian 2005. *First Flush Phenomenon Characterization.* Caltrans CTSW-RT-05-73-02.6.

micrometers will settle out when detention times are increased to 72 hours[2]. TCA states that hillsides in the project area consist of finer grained silty and clayey sands, which TCA concludes are of sufficient size to settle out in EDBs within 72 hours and therefore, TCA concluded that EDBs will capture the expected pollutants. We are still concerned with TCA's analysis and conclusions regarding EDB effectiveness because:

a. TCA implied that all particulates greater than 0.5 micrometers will settle out in 72 hrs. However, the 2007 Caltrans study found that 72 hour detention time caused "greater removal" of particles of all size ranges greater than 0.5 micrometers, not necessarily complete removal or the level of removal needed to protect the RARE Beneficial Use.
b. TCA's response does not consider the pollutant distribution among particles sizes and the impact of this factor on total pollutant removal via settling.
c. TCA ignored the particle size of roadway generated pollutants (i.e. from tire and brakepad wear, aerial deposition etc.) which are likely to have adsorbed pollutants and may not settle out in 72 hours.
d. TCA did not evaluate the effectiveness of the EDBs in capturing dissolved pollutants nor did they address the effect of dissolved pollutants from the road on receiving waters, especially with regard to the RARE Beneficial Use.

5. TCA has cited that EDB pollutant removal capability will be enhanced because approximately 40 percent of the runoff will be infiltrated[3]. However, TCA also stated that the proposed 241-S EDBs are located in areas with hydrologic soil groups C and D, which have poor infiltration rates. These statements appear to be contradictory. How will soil types impact the projected effectiveness of the EDBs?

6. The *Foothill Transportation Corridor-South Runoff Management Plan Supplemental Documentation* (RMP Supplement, 11/6/07) did not sufficiently address the 9/24/07 comments regarding hydromodification and was not adequate to demonstrate that the project would not cause degradation of receiving waters.

---

[2] Storm Water Monitoring and BMP Development Status Report 2007. Caltrans CTSW-RT-07-167.02.01.
[3] The infiltration figure is based on the Caltrans *BMP Retrofit Pilot Program Final Report*, July 2004, that found on average, approximately 40 percent of the runoff entering the unlined basins infiltrated and was not discharged. Caltrans also noted this figure varies greatly depending on soil and climactic conditions.

a. Revised Table 7-1 does not demonstrate that the flows from the EDBs would be insignificant compared to the flows in the receiving waters to prevent conditions of erosion. For example, TCA provided critical flow velocity thresholds for receiving waters, but did not compare these thresholds to expected flow velocities from the EDBs.

b. The flow splitters are intended to reduce any flow increase, resulting from the additional imperviousness, up to the design storm. The RMP Supplement, however, did not address the possible hydromodification effects from events larger than the design storm, which will not be mitigated by the flow splitters.

c. The RMP Supplement does not demonstrate that the hydromodification effects from the offsite areas, including cut and fill slopes, has been fully evaluated and mitigated.

B. Water Quality Mitigation Measures of the EIR.

Water quality mitigation measures in the project's EIR are not provided in the RMP or other project plans. TCA was notified of this deficiency in the 9/24/07 Denial without Prejudice notification. TCA's subsequent response did not demonstrate that the project would meet these EIR commitments. The RMP should be revised to ensure that the proposed project is consistent with the EIR.

1. Mitigation measure WQ-5 of the EIR states that an Operations, Maintenance and Monitoring Plan (OMMP) would be prepared to address monitoring and maintenance objectives for project BMPs. In the 1/7/07 Response to Comments package, TCA stated that the statewide Caltrans *Stormwater Quality Handbook Maintenance Staff Guide* (Guide, October 2007) would be used as the OMMP required by measure WQ-5. The Guide, however, does not contain any monitoring procedures and Caltrans has stated that they do not plan to monitor the BMPs. Therefore, the Guide does not meet WQ-5. Furthermore, the Guide is a general statewide maintenance document and does not contain project specific measures and therefore does not address the RARE beneficial uses associated with the project. The guide also lacks other project specifics such as the process for the transfer of operation and maintenance responsibility from TCA to another responsible party such as Caltrans.

2. Mitigation measure WQ-6 of the EIR states that TCA will monitor Caltrans' maintenance of the BMPs for five years to assure compliance with maintenance criteria and schedules, with annual reports provided to the Regional Board. The Regional Board requested a copy of this plan on 9/13/06, 5/21/07 and 6/11/07 and the plan has yet to be submitted. TCA has not demonstrated that this commitment will be met (i.e. frequency of monitoring, contents of reports, mechanisms to correct any problems that may be detected, responsible party for correcting problems etc.).

3. Mitigation measure 10b in Table 4.9-6 of the EIR states that BMPs will be sized for the 25 year storm. It is unclear if Sand Filters and EDBs are designed to meet this EIR sizing commitment because TCA has not finalized the Sand Filter design details. Measure 10b also states that EDBs will be equipped with oil and grease traps. Oil and grease traps are not mentioned in the RMP.

4. Mitigation Measure 10c in Table 4.9-6 of the EIR states that grass drainage channels will be constructed from the road to the EDBs/Sand Filters. Swales are proposed at only 2 EDB locations. TCA has not met Measure 10c.

5. Measure 10d in Table 4.9-6 of the EIR states that the grass drainage channels will convey runoff from the road to the EDB. Swales are proposed at only two of the EDBs. TCA states that other EDBs are located in areas with grades greater than 3 percent, which is the maximum grade for the use of swales in treatment of runoff. TCA does not demonstrate why grass drainage channels, however, cannot be used in these areas to convey runoff. TCA has not met Measure 10d.

6. Measure 10f in Table 4.9-6 of the EIR states that a methodology will be developed to monitor the level of metals and other pollutants in the EDBs and in the downstream improved and unimproved drainages. The monitoring plan was requested on 9/24/07. In the 1/7/08 response package, TCA deferred development of this plan to a later date. TCA did not specify the responsible party for development and implementation of the plan. TCA has not met measure 10f.

7. The EIR summary (page ES-62) states that BMPs will result in contaminants in runoff that are less than or equal to pre-project conditions. BMPs, however, are still designed based on Caltrans guidance to result in a significant reduction in runoff pollutants, without regard to pre-project conditions. This discrepancy has not been clarified. It appears that TCA has not met their EIR commitment.

C. *Proposed Habitat Mitigation and Monitoring Plan.* Prepared by Earthworks Restoration, Inc., Glenn Lukos Associates, and BonTerra Consulting, August 2007.

1. Compensatory mitigation for project impacts should be provided in the San Mateo Creek watershed because this is where a significant portion of impacts would occur. Currently all proposed mitigation is in the San Juan Creek watershed adjacent to the northern terminus of the project. Concerns regarding the location of proposed compensatory mitigation were communicated to TCA and/or its representatives on 10/6/06, 10/18/06, 5/21/07, 6/11/07, 9/24/07 and 11/16/07. TCA has not modified the proposed mitigation in response to these concerns. If compensatory mitigation will not be proposed in the watershed of impact, the project proponent should compensate at a higher mitigation ratio.

2. Proposed mitigation would result in a large loss of linear feet of waters. TCA proposes to fill 7.95 acres/46,366 linear feet of federal and non-federal waters of the State. Proposed mitigation consists of creation/enhancement of 11.68 acres/4,750 linear feet and enhancement of 3.0 acres/10,800 linear feet. The proposed mitigation creation ratio is 1.5:1 in terms of acreage and 0.1:1 in terms of linear feet. Mitigation should be provided at a 1:1 creation ratio in terms of acreage and linear feet to ensure creation of similar habitat as that destroyed, considering habitat types and landscape context. Additional restoration or enhancement at a 2:1 ratio is usually required to offset temporal loss.

3. The Tesoro North mitigation site is within the 300 foot "action area" considered vulnerable to indirect impacts from the road in the Hybrid Functional Assessment (HFA, 8/8/07). This area has a proposed buffer width of less than 30 meters and will have reduced buffer, hydrology and habitat functions. These concerns were communicated to TCA on 9/24/07. TCA has not changed the proposed mitigation to address these concerns.

4. There are still errors in the functional unit and acreage accounting in the revised HFA (11/28/07) that were communicated to TCA on 9/24/07 and 11/13/07. These errors undermine the validity of the conclusions drawn from the HFA. For example:

    a. Table 3 (Direct Impacts) reports total impact of 7.52 acres to Regional Board jurisdiction. However, the application for 401 Certification reports total impacts of 7.95 acres.

b. Table 4 (Indirect Impacts) of the revised HFA (11/28/07) still assigns acreage but no value to many of the water bodies considered (for example, 7-4, 7-10, FE/7-10 etc). It appears, however, that these water bodies fall within the 300 foot action area considered for indirect impacts and should therefore have a reduced functional capacity score in the post-project condition. This is not reflected in Table 4. Therefore, TCA has not fully accounted for the indirect impacts (habitat fragmentation, edge effects etc.) of the road on surrounding habitat.

5. The 1/7/08 response from TCA did not adequately address the concerns communicated on 9/24/07 regarding the impacts to the RARE beneficial uses associated with the Arroyo Toad, Least Bell's Vireo and Tidewater Goby. TCA states that impacts to water quality will be addressed through implementation of specific BMPs and project design features to control runoff. As noted in Section A of this attachment, however, the RMP fails to evaluate the RARE beneficial use in receiving waters. The response also brings up additional concerns regarding protection of the RARE beneficial use, for example:

   a. The proposed mitigation along Chiquita Creek does not compensate for habitat fragmentation and loss of upland foraging habitat for the Arroyo Toad populations in the San Mateo Creek watershed.

   b. The 12/19/07 Glenn Lukos Memorandum recognizes that the proposed road would reduce suitability of currently occupied riparian habitat for Least Bell's Vireo and proposes to replace this lost habitat through the proposed mitigation at Chiquita Creek. The Chiquita Creek mitigation area, however, is also adjacent to the proposed road and would be subject to the same indirect effects and reduced habitat suitability.

6. TCA proposes to impact six depressional wetlands. The proposed compensatory mitigation does not include depressional wetland or vernal pool mitigation. Furthermore, as noted above, these existing resources are located in San Mateo Creek watershed and proposed compensatory mitigation is located in San Juan Creek watershed. This results in a net loss of wetlands to San Mateo watershed.

D. *Baseline Water Quality Monitoring.*

The *Baseline Water Quality Investigation for the Foothill Transportation Corridor.* Prepared by RBF Consulting, Inc. and G. Fred Lee & Associates November 2000 does not provide an adequate representation of baseline conditions, nor does it provide the level of information portrayed in EIR claims (see Table 4.9-6 in the EIR).

1. TCA submitted a *Proposed Water Quality Monitoring Plan* (Plan, 12/12/07) on 1/7/08 that is intended to fulfill mitigation measure 10a in Table 4.9-6 of the EIR. The Plan proposes monitoring at two locations on San Juan Creek (where the proposed 241-S would cross the creek) and two locations on San Mateo Creek (just upstream of I-5 bridge and just downstream of 101 bridge). TCA proposes six years of monitoring because that will likely allow pre- and post-project assessment of the conditions. It is unclear how many years of pre-project monitoring is planned in order to evaluate the baseline conditions. In addition, the plan does not contain monitoring on Christianitos or other representative tributaries within or near the road alignment. Additional monitoring locations are needed to ensure adequate spatial coverage. Monitoring needs to be done to establish baseline water quality to be able to evaluate the ability of BMPs and other project design features to meet water quality standards.

E. State Water Resources Control Board Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (Anti-Degradation Policy).

TCA proposes to fill and fragment water bodies and associated wetland and riparian habitat located in San Onofre State Beach and the Donna O'Neill Land Conservancy. These resources have been protected from development and provide exceptional recreational and ecological significance[4]. State and Federal Anti-Degradation Policies require protection of existing high quality waters. The proposed alignment would disrupt REC-1 and REC-2 Beneficial Uses associated with San Onofre State Beach, would fragment habitat currently occupied by threatened and endangered species in impacted areas and would introduce pollution from road runoff into receiving waters. TCA has not demonstrated that existing high quality waters will be maintained, or losses appropriately mitigated, with the current project design. The Anti-Degradation policy pertains to all aspects of the project discussed above, including the RMP, water quality mitigation measures and water quality monitoring.

[4] Exceptional ecological significance is demonstrated by the WARM, COLD, WILD and RARE Beneficial Uses assigned to San Juan, San Mateo and San Onofre Creeks and their watersheds and the presence of several threatened and endangered species including the Arroyo Toad, Tidewater Goby and Least Bell's Vireo and Southern Steelhead. Additionally, San Mateo watershed is one of the last remaining watersheds in Southern California that provides an intact, undeveloped corridor from the foothills to the coast. Exceptional recreational significance is demonstrated by the high visitation rates to San Onofre State Beach, the unique opportunity to experience and observe a relatively undeveloped Southern California watershed and the world renowned surfing breaks at Trestles.

EXHIBIT B

FILED
NORTH COUNTY DIVISION
2013 MAY 22 PM 3:22
(31)
CLERK-SUPERIOR COURT
SAN DIEGO COUNTY, CA

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VIA FAX

[continued on next page]

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN DIEGO, NORTH COUNTY DIVISION

CALIFORNIA STATE PARKS FOUNDATION, ENDANGERED HABITATS LEAGUE, LAGUNA GREENBELT, INC., NATURAL RESOURCES DEFENSE COUNCIL, SEA AND SAGE AUDUBON SOCIETY, SIERRA CLUB, ORANGE COUNTY COASTKEEPER, CALIFORNIA COASTAL PROTECTION NETWORK, NATIONAL AUDUBON SOCIETY dba AUDUBON CALIFORNIA, AND SURFRIDER FOUNDATION, Petitioners, v. FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY, a Joint Powers Agency; BOARD OF DIRECTORS OF THE FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY; and DOES 1 through 40, INCLUSIVE, Respondents.	Case No. 37-2013-00049797-CU-WM-NC **VERIFIED PETITION FOR WRIT OF MANDATE** [CCP § 1085 (§ 1094.5); California Environmental Quality Act ("CEQA")]

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INTRODUCTION

1. This action challenges the April 18, 2013 decision of Respondents Foothill/Eastern Transportation Corridor Agency and its Board of Directors (collectively "TCA") to approve the first 5.5-mile segment of a 16-mile toll road known as the "Foothill-South" in violation of the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 et seq. The TCA calls this initial segment the "Tesoro Extension."

2. The Foothill-South project would involve the construction of a six-lane highway through 16 miles of virtually undeveloped lands in one of the most environmentally sensitive areas in California, including the Reserve at Rancho Mission Viejo, the Richard and Donna O'Neill Land Conservancy, and four miles of San Onofre State Beach in San Diego County, one of the most popular state parks in California. The Foothill-South is unprecedented in that it would be the first time in California that an agency comprised entirely of local governments would take designated State Park lands for its own highway purposes.

3. In approving the Tesoro Extension, TCA relied on the 2006 Final Subsequent Environmental Impact Report ("2006 EIR") prepared for the Foothill-South project. TCA's approval of the Foothill-South and the 2006 EIR was challenged in two consolidated CEQA lawsuits, one brought by seven of the Petitioners in this action, and the other by the California Attorney General and the State Park and Recreation Commission (Case Nos. GIN051194 and GIN051371) ("2006 CEQA Litigation").

4. On February 6, 2008, while the 2006 CEQA Litigation was pending, the California Coastal Commission rejected TCA's request for a concurrence in TCA's certification of the Foothill-South under the Coastal Zone Management Act of 1972 ("CZMA"), 16 U.S.C. § 1451 et seq. The Coastal Commission found that the Foothill-South would have devastating impacts on coastal zone resources, that the TCA failed to meaningfully consider alternatives to the project, and that therefore, the Foothill-South was inconsistent with the enforceable policies of the California Coastal Management Program. On appeal from TCA, the U.S. Secretary of Commerce upheld the Commission's decision in December 2008.

5. Following the state and federal rejection of the Foothill-South under the CZMA, the petitioners in the 2006 CEQA Litigation conditionally dismissed their lawsuits, reserving the right to reinstate the litigation if it ever became necessary. Now, because TCA's approval of the Tesoro Extension relies on the 2006 EIR, environmental petitioners have taken steps to reinstate the 2006 CEQA Litigation.

6. As with TCA's 2006 approval of the Foothill-South project as a whole, TCA's 2013 decision to move ahead with the Tesoro Extension violates CEQA because it relies upon the same 2006 EIR, which is legally inadequate. The 2006 EIR failed to identify or adequately analyze numerous significant impacts of the Foothill-South, assumed some of the most significant impacts would be eliminated or substantially reduced by mitigation measures that have yet to be specifically identified or developed, and failed to consider viable alternatives to the Foothill-South.

7. The TCA's approval of the Tesoro Extension further violates CEQA because TCA failed to prepare a new EIR, or a subsequent or supplemental EIR ("SEIR"), for the project. An SEIR is necessary to analyze new information and substantial changes in circumstances since 2006 that will require substantial changes to the Foothill-South project and major revisions to the environmental analysis in the 2006 EIR. Instead, TCA approved and relied upon an addendum to the 2006 EIR ("Addendum") that ignores this new information and changed circumstances.

8. For example, the determination by the Coastal Commission and the Secretary of Commerce that the Foothill-South violates the CZMA means that the project as described in the 2006 EIR has become legally infeasible. Consequently, a major redesign or realignment of the project will be necessary for the project to proceed. The Addendum fails to describe these changes to the project, analyze their environmental impacts, or provide required mitigation. Instead, TCA relies on the now incomplete and inaccurate project description in the 2006 EIR.

9. In addition, new information has become available since approval of the 2006 EIR showing that the impacts of the Foothill-South will be substantially greater than

previously identified. For example, new studies have revealed a precipitous decline in coastal cactus wren populations since 2006, which will make the impacts to cactus wren far more significant than analyzed in the 2006 EIR.

10. To the extent TCA asserts that the Tesoro Extension may be treated as a project separate from the Foothill-South and environmental review limited to the impacts of the Tesoro Extension alone, such approach constitutes improper segmentation under CEQA. CEQA requires that the whole of a project be analyzed, from start to finish, before any initial approvals are made. TCA has consistently stated that it intends to construct the entirety of the Foothill-South and that the Tesoro Extension is simply the first segment of the Foothill-South. TCA's failure to adequately analyze the impacts of the Foothill-South project as a whole—including impacts not previously analyzed due to new information, changed circumstances, and changes to the project—violates CEQA.

11. In addition, even if the Tesoro Extension could be treated as a project separate from the remainder of the Foothill-South, TCA was not permitted to rely on the 2006 EIR without recirculating the document for public review and comment, responding to public comments, identifying the specific significant impacts caused by the separate project and feasible mitigation measures and alternatives to lessen or avoid those impacts, and adopting required findings, including findings describing the impacts and overriding benefits the separate project. TCA's failure to comply with these requirements violates CEQA.

12. TCA prejudicially abused its discretion by approving the Addendum and the Tesoro Extension in violation of CEQA. TCA's approval of the Addendum and approval of the Tesoro Extension accordingly must be set aside.

PARTIES

13. Petitioner California State Parks Foundation is the only statewide organization dedicated to protecting, enhancing, and advocating for the California State Park system. Founded 44 years ago, the California State Parks Foundation now has 130,000 members residing in California, including over 17,000 members in San Diego and Orange Counties. Members and supporters of the California State Parks Foundation use and enjoy the

natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of the California State Parks Foundation are residents and taxpayers of San Diego and Orange Counties who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). The California State Parks Foundation and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish affordable recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that the California State Parks Foundation seeks to further in this action are within the purposes and goals of the organization.

14. Petitioner Endangered Habitats League ("EHL") is a non-profit organization dedicated to protecting the unique scenic, biological, and natural resources of southern California. Through participation in community and regional planning processes, EHL promotes sustainable land use planning that both serves area residents and preserves native landscapes. Members and supporters of EHL use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of EHL are residents and taxpayers of San Diego and Orange Counties who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). EHL and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that EHL seeks to further in this action are within the purposes and goals of the organization.

15. Petitioner Laguna Greenbelt, Inc. is a grassroots organization in Laguna Beach, California, that has promoted the preservation and acquisition of open space in Orange County for the benefit of the public since 1967. Members and supporters of Laguna Greenbelt

use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of Laguna Greenbelt are residents and taxpayers of Orange County who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). Laguna Greenbelt and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat and connectivity, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that Laguna Greenbelt seeks to further in this action are within the purposes and goals of the organization.

16. Petitioner Natural Resources Defense Council ("NRDC") is a national non-profit organization with an office in Santa Monica, California, and more than 363,000 members dedicated to the protection of the environment, more than 65,000 of whom live in California, including San Diego and Orange Counties. Members of NRDC use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of NRDC are residents and taxpayers of Orange County and San Diego County who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). NRDC and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that NRDC seeks to further in this action are within the purposes and goals of the organization.

17. Petitioner Sea and Sage Audubon Society is a non-profit organization based in Orange County dedicated to the conservation of natural resources and public education regarding those values. Members and supporters of the Sea and Sage Audubon Society use and enjoy the natural and scenic resources of northern San Diego County and southern Orange

County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of the Sea and Sage Audubon Society are residents and taxpayers of San Diego and Orange Counties who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). The Sea and Sage Audubon Society and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that the Sea and Sage Audubon Society seeks to further in this action are within the purposes and goals of the organization.

18. Petitioner National Audubon Society is now, and at all times pertinent to this action has been, a corporation organized and operating under the laws of the State of New York and doing business in California under the name Audubon California. Audubon California's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Members and supporters of Audubon California use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of Audubon California are residents and taxpayers of San Diego and Orange Counties who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). Audubon California and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that Audubon California seeks to further in this action are within the purposes and goals of the organization.

19. Petitioner Sierra Club was founded in 1892 and is the nation's oldest grass-roots environmental organization. The Sierra Club is a non-profit organization incorporated

under the laws of the State of California. Currently, the Sierra Club has approximately 600,000 members, approximately 144,000 of whom live in California. The Sierra Club's Friends of the Foothills project represents residents concerned with environmental protection and land use planning in northern San Diego County and southern Orange County. Members of Sierra Club use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of Sierra Club are residents and taxpayers of Orange County and San Diego County who will be negatively affected by the improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). Sierra Club and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that Sierra Club seeks to further in this action are within the purposes and goals of the organization.

20. Petitioner Surfrider Foundation, Inc. ("Surfrider") is a grassroots, non-profit, environmental organization dedicated to the protection of the world's oceans, waves, and beaches through a powerful activist network. Founded in 1984, Surfrider now has over 250,000 supporters, activists, and members and 84 chapters in the United States, with over 51 percent of its membership residing in California. Surfrider's most important coastal environmental work is carried out by its chapters, including its San Diego County and South Orange County chapters, both of which have actively opposed the Foothill-South, including the Tesoro Extension. Members and supporters of Surfrider are surfers and other beach enthusiasts who regularly use and enjoy San Onofre State Beach and other natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of Surfrider are residents and taxpayers of San Diego and Orange Counties who will be negatively affected by improper approval and adverse environmental impacts of the Foothill-South (including the Tesoro Extension). Surfrider and its members are directly affected by regional

decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that Surfrider seeks to further in this action are within the purposes and goals of the organization.

21. Petitioner Orange County Coastkeeper is a grassroots organization that has worked to protect and preserve the region's watersheds and marine habitats since 1999. Members and supporters of Orange County Coastkeeper use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. Members and supporters of Orange County Coastkeeper are residents and taxpayers of Orange County who will be negatively affected by the adverse environmental impacts and improper approval of the Foothill-South (including the Tesoro Extension). Orange County Coastkeeper and its members are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment and impair their community's quality of life. The interests that Orange County Coastkeeper seeks to further in this action are within the purposes and goals of the organization.

22. Petitioner California Coastal Protection Network is a California public benefit corporation, dedicated to the protection of the California coast through education, research, and empowerment of public citizens. Supporters of California Coastal Protection Network use and enjoy the natural and scenic resources of northern San Diego County and southern Orange County, where the Foothill-South (including the Tesoro Extension) is located, including the recreational facilities offered in that region. California Coastal Protection Network and its supporters will be negatively affected by the adverse environmental impacts and improper approval of the Foothill-South (including the Tesoro Extension). California Coastal Protection Network and its supporters are directly affected by regional decisions that induce urban sprawl, destroy wildlife habitat, diminish recreational opportunities, increase air pollution, traffic congestion, and water contamination, and generally threaten the environment

and impair their community's quality of life. The interests that California Coastal Protection Network seeks to further in this action are within the purposes and goals of the organization.

23. Each of the Petitioners and its members and supporters has a direct and beneficial interest in TCA's compliance with laws bearing upon approval and construction of the Foothill-South (including the Tesoro Extension). These interests would be directly and adversely affected by the alleged violations of law set forth in this Petition, which would cause substantial and irreversible harm to State park resources and to the natural environment if not remedied. The maintenance and prosecution of this action will confer a substantial benefit on the public by protecting the public from the environmental and other harms alleged herein.

24. Respondent Foothill/Eastern Transportation Corridor Agency ("Agency") is a joint powers agency organized under the authority of the Joint Exercise of Powers Act, Government Code § 6500 et seq., and existing pursuant to a Joint Exercise of Powers Agreement among its member entities. Members of the Agency include the County of Orange and the Cities of Anaheim, Dana Point, Irvine, Lake Forest, Mission Viejo, Orange, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Tustin, and Yorba Linda. The Agency is the "lead agency" for the Tesoro Extension and the Foothill-South for purposes of Public Resources Code § 21067, and has principal responsibility for conducting environmental review for the Tesoro Extension and the Foothill-South and taking other actions necessary to comply with CEQA.

25. Respondent Board of Directors of the Foothill/Eastern Transportation Corridor Agency ("TCA Board") is the governing body of the Agency and is responsible for planning and implementing projects within the Agency's authority, complying with state and federal law, and approving the Tesoro Extension and the Foothill-South. The TCA Board and its members are sued here in their official capacities.

26. Petitioners do not know the true names and capacities, whether individual, corporate, associate, or otherwise, of Respondents DOE 1 through DOE 20, inclusive, and therefore sue said Respondents under fictitious names. Petitioners will amend this Petition to show their true names and capacities when the same have been ascertained. Each of the

respondents is the agent and/or employee of Respondent TCA, and each performed acts on which this action is based within the course and scope of such Respondent's agency and/or employment.

JURISDICTION AND VENUE

27. Pursuant to California Code of Civil Procedure section 1085 (alternatively section 1094.5) and Public Resources Code sections 21168.5 (alternatively section 21168) and 21168.9, this Court has jurisdiction to issue a writ of mandate to set aside TCA's decision to approve the Addendum and the Tesoro Extension.

28. Venue is proper in this Court because the causes of action alleged in this Petition arose in part in the County of San Diego. *See California State Parks Foundation v. Superior Court* (2007) 150 Cal.App.4th 826. The Tesoro Extension is the first phase of the Foothill–South, the same project challenged in the 2006 CEQA Litigation. This action involves the same respondents and many of the same petitioners as the 2006 litigation, and will require, in part, resolution of the same claims concerning the validity of the 2006 EIR and the 2006 findings adopted by TCA for the Foothill-South project. A substantial portion of the Foothill-South lies within the County of San Diego, including the entirety of that portion of the Foothill-South that would run through San Onofre State Beach. Many of the significant environmental impacts of the Foothill-South that are the subject of this lawsuit would occur in San Diego County, and the Foothill-South would impact State park property interests in San Diego County. Venue is proper in the North County Division of this Court in accordance with Local Rule 1.2.2(E).

29. Petitioners have complied with the requirements of Public Resources Code section 21167.5 by serving a written notice of Petitioners' intention to commence this action on TCA on May 20, 2013. A copy of the written notice and proof of service is attached hereto as Exhibit A.

30. Petitioners will comply with the requirements of Public Resources Code section 21167.6 by concurrently filing a notice of their election to prepare the record of administrative proceedings relating to this action.

31. Petitioners have complied with the requirements of Public Resources Code section 21167.7 by sending a copy of this Petition to the California Attorney General on May 22, 2013. A copy of the letter transmitting this Petition is attached hereto as Exhibit B.

32. Petitioners have performed any and all conditions precedent to filing this instant action and have exhausted any and all available administrative remedies to the extent required by law.

33. Petitioners have no plain, speedy, or adequate remedy in the course of ordinary law unless this Court grants the requested writ of mandate to require TCA to set aside its approval of the Addendum and Tesoro Extension. In the absence of such remedies, TCA's decisions will remain in effect in violation of state law.

STATEMENT OF FACTS

I. Foothill-South Project Area - Affected Environment

34. The Foothill-South as approved by TCA in 2006 would extend 16 miles from the current terminus of State Highway 241 in southern Orange County to Interstate 5 ("I-5") in northern San Diego County. The Foothill-South footprint alone would occupy nearly 1,200 acres, and would traverse some of the most important open space and wildlife habitat areas in southern California. The vast majority of the Foothill-South site is presently undeveloped open space.

35. The area impacted by the Foothill-South has been recognized as a biological "hotspot" of global significance. It supports numerous rare, endemic, and special status species, including the Pacific pocket mouse, steelhead trout, California gnatcatcher, mountain lion, coastal cactus wren, and dozens of other species. Construction of the Foothill-South would permanently eradicate hundreds of acres of the coastal sage scrub, chaparral, grassland, wetland, riparian, and woodland habitat on which these species depend for survival and recovery.

36. The Foothill-South route selected by TCA runs through lands that are currently set aside for open space, recreational, and/or preservation purposes, including San Onofre State Beach, the Donna O'Neill Land Conservancy, and portions of the Rancho Mission

Viejo property.

37. San Onofre State Beach is one of the most important recreational resources on the California coast. It is one of the most visited state parks in California, and provides one of the few affordable coastal camping and recreational opportunities for working families in the region. The inland Cristianitos Subunit of the park is comprised of 1,200 acres that include San Mateo Campground, the park's most popular campground with nearly 200,000 campers per year. The park provides valuable and rare upland and wetland habitats, including unique habitat for eleven protected species listed as threatened or endangered under federal laws (steelhead trout, arroyo toad, California gnatcatcher, Least Bell's vireo, Southwestern willow flycatcher, Riverside fairy shrimp, San Diego fairy shrimp, snowy plover, Pacific pocket mouse, thread-leaved brodiaea, and tidewater goby). The park also contains nationally recognized historic and archeological sites, including remnants of a Juaneño Indian village. Trestles Beach, a world-class surfing beach within the park near the mouth of San Mateo Creek, is internationally recognized for its natural setting and the unique surf conditions that result from the largely undeveloped San Mateo watershed. The park represents the last large coastal open space recreational and habitat opportunity in Southern California and cannot be replicated in the region.

38. San Onofre State Beach attracts 1.5 to 2.5 million visitors a year and is a valuable part of the State's multi-billion dollar coastal tourism and recreational economies, providing financial benefits from sporting, fishing, camping, surfing, and other recreational activities, as well as drawing tourists from around the world.

39. The park is located on property leased for fifty years from the United States and was established in 1971 by President Nixon and Governor Reagan. The park was subsequently named and classified by the State as San Onofre State Beach. The land was intended to be permanently transferred to the state when no longer needed by the federal government. Section 5096.400 of the Public Resources Code provides that "if the Camp Pendleton Marine Base in the County of San Diego ceases to be used as a federal facility, it shall be converted to an open-space area or greenbelt that shall be administered by the [D]epartment

[of Parks and Recreation]." In recognition of the extraordinary recreational value of San Onofre State Park to the people of the State, the California legislature enacted Government Code section 11011.7, which states: "All real property acquired for park and recreation purposes by the state which was formerly part of Camp Pendleton shall be used solely for park and recreation purposes and no part thereof shall be declared surplus or disposed of." The legislature also designated San Onofre State Beach as part of the San Diego Coast State Seashore (Pub. Res. Code § 5001.6).

40. The Foothill-South would traverse the entire four-mile length of the inland portion of San Onofre State Beach, permanently removing over 320 acres (27 percent of the inland subunit) and fragmenting the remainder. The thoroughfare would be constructed within 200 feet of the campground. A 16-foot high soundwall along the park segment of the road was included as "mitigation" for the Project. The Parks Department has stated that if the Foothill-South is constructed through the park, it must abandon the campground and, with the exception of a parking lot, the entire Cristianitos subunit—almost 60 percent of the park. TCA never considered this impact.

41. The Donna O'Neill Land Conservancy is a biologically sensitive wilderness reserve covering approximately 1,200 acres. The Conservancy is subject to a conservation easement intended to protect the land from development in perpetuity. The Conservancy also offers recreational and educational programs to members and the general public. The Conservancy property was set aside as mitigation to offset the environmental impacts of the nearby Talega residential development. The Foothill-South would run through the entire length of the Conservancy on its western side, permanently eliminating more than 150 acres of valuable wildlife habitat and isolating substantial portions of the reserve from adjacent habitat.

42. The Tesoro Extension segment of the Foothill-South would traverse private lands that comprise the property commonly known as Rancho Mission Viejo. A significant portion of the land affected by the Foothill-South within the Rancho Mission Viejo property, commonly known as the Reserve at Rancho Mission Viejo, has been permanently restricted to

open space and compatible uses pursuant to a settlement agreement and recorded deed restrictions in connection with litigation challenging Orange County's approval of development entitlements for the property. These lands include valuable coastal sage scrub that provides habitat for the threatened California gnatcatcher, and for the San Diego cactus wren, a species of special concern whose populations have declined precipitously in recent years.

43. The Foothill-South would traverse, permanently alter, and in some cases substantially fill dozens of small tributary drainages to San Juan Creek, Cristianitos Creek, and San Mateo Creek. According to the California Department of Fish and Game, endangered steelhead trout, once thought to be extirpated from the region, currently spawn and reside in San Juan Creek and San Mateo Creek. The San Mateo Creek watershed is particularly important to steelhead survival and recovery due to its relatively undeveloped character. The Foothill-South will result in significant damage to the sub-watersheds feeding the lower reaches of San Mateo Creek through which steelhead must migrate. The Foothill-South would pave over more than a quarter of the land within certain sub-watersheds and physically disturb up to 100 percent of the land in others.

44. The Pacific pocket mouse is considered a critically endangered species, the highest threat rating other than extinct in the wild. The species presently occupies only four known sites, one of which is within the Cristianitos Subunit of San Onofre State Beach. The footprint of the Foothill South is within several feet of locations where individuals from this site have been trapped. The Foothill South would run between this site and one of the other known sites to the east, isolating the western site and thereby further jeopardizing the species' chance for survival and recovery. Yet, TCA approved the Foothill-South based in part on a conclusion that the Foothill-South's impacts on the Pacific pocket mouse would not be significant.

45. There are feasible alternatives to the Foothill-South that would not be located in open space areas and thus would avoid most or all of the biological, cultural, and recreational resources impacted by the Foothill-South. The existing I-5 freeway in Orange County runs through lands that are already developed. Transportation improvements within the I-5 freeway, primarily the construction of new high-occupancy vehicle and mixed-flow lanes,

together with limited arterial improvements, would achieve traffic benefits that, according to TCA's own data, equal or exceed those of the Foothill-South.

II. Foothill-South Background and Environmental Review

46. The idea behind the Foothill-South was conceived by Orange County over 25 years ago, and was shown in concept in the County's 1981 Master Plan of Arterial Highways. In 1991, TCA prepared an initial environmental analysis of various toll road alignments and selected a "locally preferred" alignment similar to that of the Foothill-South.

47. In the mid-1990s, however, TCA, the California Department of Transportation, the Federal Highway Administration ("FHWA"), and several other state and federal permitting agencies agreed to a coordinated environmental review process that became known as the South Orange County Transportation Infrastructure Improvement Project ("SOCTIIP") Collaborative. The stated purpose of SOCTIIP, as approved by the Collaborative in 1999, was to "provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement and future traffic demands on I-5 and the arterial network" in southern Orange County. The SOCTIIP purpose statement did not presuppose that a toll road option would be required to meet the SOCTIIP objectives, and provided that all alternatives to achieving those objectives would be given equal consideration.

48. In April 2004, TCA and FHWA released a combined Draft Environmental Impact Statement/Subsequent Environmental Impact Report ("DEIS/SEIR") for the SOCTIIP project. The DEIS/SEIR evaluated eight action alternatives: six "corridor" alternatives that involve the construction of a new toll road ("toll road corridor alternatives"); one alternative calling for improvements to arterials (major surface streets); and one alternative that would widen the existing I-5 by two lanes in either direction. The DEIS/SEIR found that all of these alternatives would meet the objectives set forth in the SOCTIIP purpose and need statement. However, TCA added a separate set of its own objectives to the DEIS/SEIR that were substantially more narrow than those of the SOCTIIP, including objectives that could be achieved only through construction of a toll road corridor alternative. For example, TCA added

the following objective: "Implement the Orange County Master Plan of Arterial Highways by completing the transportation corridor system in south Orange County, between existing SR 241 and I-5."

49. In addition, a number of alternatives were eliminated from further consideration in the DEIS/SEIR without detailed analysis, including an alternative that would combine more limited widening of I-5 with arterial improvements (the "Arterial Improvements Plus" or "AIP" alternative). The DEIS/SEIR asserted that this alternative would require the displacement of hundreds of existing homes and businesses, and eliminated it from consideration on that basis.

50. TCA reported that it received more than 6,000 comment letters during the public comment period on the DEIS/SEIR. Numerous federal and state agencies, community and environmental organizations, and individuals expressed concerns about the environmental impacts of the Project and the environmental review process, including the Environmental Protection Agency, National Oceanic and Atmospheric Administration, United States Fish and Wildlife Service ("USFWS"), California Department of Parks and Recreation, California Coastal Commission, California Department of Fish and Game, and California Attorney General.

51. Petitioners submitted extensive comments on the DEIS/SEIR identifying the legal inadequacies of the document, which are incorporated herein as if fully set forth. These comments include, but are not limited to, the following:

(a) The stated CEQA objectives for the Foothill-South are overly narrow, inconsistent with the Project purpose developed in collaboration with federal agencies, and foreordain selection of a toll road corridor alternative.

(b) The DEIS/SEIR failed to adequately analyze the Foothill-South's environmental impacts, including, but not limited to, impacts related to biological resources, threatened and endangered species, air quality, recreational facilities, water quality, hazardous materials, visual resources, noise, coastal zone resources, socioeconomic effects, and agricultural resources.

(c) The DEIS/SEIR failed to provide substantial evidence in support of its conclusions regarding the level of significance of the Foothill-South's impacts and the efficacy of proposed mitigation measures.

(d) The DEIS/SEIR improperly deferred impact analysis and development of mitigation measures by, inter alia, failing to identify with specificity how and whether impacts to biological and recreational resources can and will be avoided or mitigated.

(e) The traffic and circulation analysis overstated traffic benefits from construction of the toll road corridor alternatives by, inter alia, failing to account for increased traffic congestion resulting from "induced demand" as required by standard traffic modeling practice.

(f) The DEIS/SEIR failed to consider a reasonable range of alternatives by, inter alia, failing to give meaningful consideration to alternatives to the Foothill-South and rejecting without adequate evidentiary basis alternatives that would meet project objectives.

(g) The DEIS/SEIR failed to adequately analyze growth-inducing and cumulative impacts.

(h) The DEIS/SEIR was so fundamentally flawed as to preclude meaningful public review, and should have been revised and recirculated.

52. Numerous other commenters on the DEIS/SEIR identified deficiencies in the document. State and federal agencies objected to, inter alia, the evaluation of impacts to biological resources, recreational facilities, water quality, and cultural and archaeological resources. Community organizations and individuals, including members of Native American groups, commented among other things that the DEIS/SEIR failed to account for significant adverse impacts to known cultural resources and sacred sites within the footprint of the toll road.

III. 2006 Final EIR and Foothill-South Approval

53. TCA did not recirculate a draft EIR. Instead, it prepared responses to comments and released a Final Subsequent Environmental Impact Report (FSEIR) in December 2005. The FSEIR was not combined with a final EIS, and no final EIS has been approved by

FWHA to date pursuant to the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ("NEPA").

54. The FSEIR identified a modified form of one of the toll road corridor alternatives (called the A7C-FEC-M alternative) as TCA's Preferred Alternative. The Preferred Alternative is a six-lane toll road that would run southward from the City of Rancho Santa Margarita in Orange County to I-5 in San Diego County, traversing the Rancho Mission Viejo planned community (including areas to be preserved as open space), the length of the Donna O'Neill Land Conservancy, and the entire inland portion of San Onofre Beach State Park. The Preferred Alternative also includes the construction of extended detention basins, soundwalls, culverts, bridges, toll plazas, and interchanges, as well as extensive grading and disturbance during construction activities. TCA now estimates the cost of constructing the Foothill-South at $1.733 billion, almost double the estimated cost at the time TCA approved the Foothill-South in 2006.

55. On January 12, 2006, TCA received testimony and comments on the FSEIR from numerous state and local officials and members of the public, including Petitioners.

56. Petitioners submitted comments on the FSEIR and related proposed Findings, Facts in Support of Findings, and Statement of Overriding Considerations, which are incorporated herein as if fully set forth. Letters and additional materials submitted by Petitioners on or about January 12, 2006, January 16, 2006, and February 23, 2006, included, but were not limited to, the following comments:

(a) The FSEIR failed to rectify the legal inadequacies of the DEIS/SEIR identified in Petitioners' prior comments;

(b) There was no substantial evidence in the record to support the conclusion in the FSEIR and related findings that alternatives to the Foothill-South involving the widening of I-5 and improvements to arterial roads would be economically or otherwise infeasible. No evidence in the record supported TCA's assertions that hundreds of homes and businesses would be displaced by such alternatives. Petitioners submitted substantial evidence demonstrating that the required improvements could be accomplished with little if any

displacement, and that certain improvements were incorrectly attributed as part of these alternatives since they are planned to occur regardless of whether the toll road is constructed.

(c) The FSEIR's biological resources analysis is inadequate because, inter alia, it improperly deferred analysis and mitigation of impacts to biological resources, failed to adequately analyze and mitigate impacts to sensitive species (including the Pacific pocket mouse, steelhead trout, tidewater goby, and mountain lion), and failed to adequately analyze and mitigate impacts to resources in the San Mateo Creek watershed, including impacts to Trestles Beach.

(d) The proposed mitigation for biological impacts was also deficient because it failed to account for the fact that most of the habitat that would be destroyed by the Project is already dedicated for conservation purposes, including lands that were set aside as mitigation for the impacts of other projects. Proposed measures to preserve existing habitat are illusory mitigation in that they would not increase the aggregate amount of preserved habitat and effectively double-count earlier mitigation and preservation efforts.

(e) TCA's own data and analysis show that its failure to consider induced demand in its traffic modeling resulted in substantial understatement in its traffic projections for the Foothill-South. This error was dismissed as insignificant, despite being up to an order of magnitude greater than the total difference in projected traffic with and without the toll road.

(f) The FSEIR's air quality analysis is inadequate because, inter alia, it relied on an acknowledged and substantial underestimation of traffic on surface streets, completely failed to analyze or mitigate potentially significant impacts from fine particulate pollution (PM2.5) or from most toxic air pollutants (including formaldehyde, butadiene, and benzene), relied on an improper baseline for PM10 impacts, and failed to properly analyze cumulative air quality impacts.

(g) The FSEIR failed to adequately analyze or mitigate impacts to, inter alia, recreational, cultural, and archaeological resources.

(h) The inadequacies of the environmental analysis, as well as

significant new information that was added to the FSEIR, required that the EIR be recirculated for public review and comment.

(i) The proposed findings regarding the impacts of the Foothill-South, the feasibility of mitigation measures and alternatives that would avoid or lessen the environmental impacts of the Project, and overriding considerations for approving the Foothill-South, were unsupported by substantial evidence in the record.

57. On February 23, 2006, the TCA Board adopted Resolution Nos. F2006-01 and F2006-02 certifying the EIR, adopting the proposed findings, selecting the Preferred Alternative, and directing the Chief Executive Officer of TCA to take actions necessary to implement the Project. TCA subsequently filed a Notice of Determination for the Foothill-South.

IV. CEQA Challenges to Foothill-South

58. On March 23, 2006, seven of the Petitioners in the current action (California State Parks Foundation, EHL, Laguna Greenbelt, Inc., NRDC, Sea and Sage Audubon Society, Sierra Club, and Surfrider) filed a lawsuit alleging, inter alia, that TCA prejudicially abused its discretion by certifying an EIR that does not comply with the requirements of CEQA and approving the Foothill-South in reliance thereon, and asking this Court to set aside TCA's certification of the EIR and approval of the Foothill-South. The 2006 lawsuit alleged two causes of action.

59. First, Petitioners alleged that the Foothill-South EIR fails to comply with the requirements of CEQA and the CEQA Guidelines, California Code of Regulations, title 14, section 15000 et seq. ("CEQA Guidelines"), because, among other things, TCA:

(a) Failed to adopt objectives that allowed for meaningful analysis of alternatives;

(b) Failed to adequately disclose or analyze the Project's significant impacts on the environment, including, but not limited to, the Project's impacts on traffic and circulation, biological resources, air quality, recreational resources, water quality, visual resources, noise, coastal resources, agricultural resources, and cultural and archaeological

resources ;

(c) Improperly deferred impact analysis and mitigation measures;

(d) Failed to adequately mitigate Project impacts;

(e) Failed to adequately disclose or analyze the Project's significant cumulative and growth-inducing impacts;

(f) Failed to consider a reasonable range of alternatives;

(g) Failed to adequately analyze the alternatives that were considered; and

(h) Failed to revise and recirculate the Draft Subsequent EIR.

60. Second, Petitioners alleged that TCA violated CEQA by adopting findings that fail to comply with the requirements of CEQA and the CEQA Guidelines, including, but not limited to, the following:

(a) The determination that certain impacts would be less than significant and/or that adopted mitigation measures would avoid or lessen the Project's significant impacts on the environment;

(b) The determination that alternatives to the Project that would avoid or lessen the significant impacts of the Project are infeasible;

(c) The determination that various mitigation measures that would avoid or lessen the significant impacts of the Project are infeasible; and

(d) The determination that the overriding economic, legal, social, technological, or other benefits of the Project outweigh its significant impacts on the environment.

61. The Attorney General of the State of California also filed a CEQA lawsuit challenging TCA's approval of the Foothill-South, on behalf of the California Park and Recreation Commission and the People of California. On June 16, 2006, this Court consolidated the Attorney General's CEQA suit and the Petitioners' suit.

V. Rejection of Foothill-South Under CZMA

62. While these and other lawsuits challenging the Foothill-South were

pending, TCA sought the California Coastal Commission's concurrence in TCA's certification that the Foothill-South was consistent with CZMA. On February 6, 2008, the Coastal Commission held a hearing on TCA's application. Over 3,000 members of the public attended the hearing, the largest in Coastal Commission history. Representatives of Petitioners also attended the hearing and submitted written comments on the consistency determination. The staff report on the item found that, based on the significant impacts of the Foothill-South on numerous coastal zone resources, the Foothill-South was inconsistent with numerous enforceable policies of the California Coastal Management Program. The report further found that TCA had failed to adequately consider six feasible alternatives to the Foothill-South that could accomplish its primary objective—relieving congestion on I-5—while avoiding the impacts of the Foothill-South. Three of the alternatives involved improving I-5 and selected adjacent arterials; three others involved alternate toll road alignments that are closer to existing development and avoid sensitive resources. The then Executive Director of the Coastal Commission stated: "Since passage of the California Coastal Act in 1976, I know of no other coastal development project so demonstrably inconsistent with the law . . . This toll road [project] is precisely the kind of project the Coastal Act was intended to prevent." The Coastal Commission adopted staff's findings and rejected TCA's application.

63. TCA appealed the Coastal Commission's decision to the U.S. Secretary of Commerce. Petitioners submitted extensive comments to the Secretary of Commerce, opposing TCA's appeal. On December 18, 2008, following a hearing that, like the Coastal Commission hearing, was attended by thousands, the Secretary of Commerce upheld the Commission's decision.

64. The CZMA prohibits federal agencies from approving or funding projects that are found to be inconsistent with the enforceable policies of a state's coastal management program. 16 U.S.C. § 1456(c)(3). The Foothill-South requires numerous federal approvals. Accordingly, the Foothill-South, as approved by TCA in 2006, is no longer legally feasible.

65. On May 19, 2008, following the Coastal Commission's consistency determination, Petitioners submitted extensive comments to FHWA, requesting that a new draft

EIS be prepared and circulated for public review prior to any federal approvals of the Foothill-South project due to the development of new information concerning the project's impacts, the need to reconsider fundamental assumptions about the project's purpose, need, and effectiveness, and the availability of environmentally superior alternatives.

66. Following the Coastal Commission's action, the parties in the consolidated 2006 CEQA Litigation stipulated to stay those actions. On January 12, 2011, this Court approved an interim settlement in the 2006 CEQA Litigation, whereby a further stay of the litigation was effectuated through a conditional dismissal without prejudice, with a right to reinstate the litigation. On or about May 22, 2013, in response to TCA's approval of the Tesoro Extension, the Petitioners who were party to the 2006 CEQA Litigation moved to reinstate that litigation.

VI. Decision to Piecemeal the Foothill-South: The Tesoro Extension

67. In the more than four years since the CZMA proceedings concluded, TCA has yet to formally identify or describe how it intends to redesign or realign the project to come into compliance with the CZMA. TCA staff at times has proposed re-aligning the final segment of the project further east on Camp Pendleton. But the TCA Board has taken no action to approve this realignment or any other changes the project that could bring it into compliance with the law, much less analyzed the impacts of those modifications. Instead, TCA adopted a piecemealing strategy of moving forward with the approval and construction of the first segment of the Foothill-South, the Tesoro Extension, without considering where the remainder of the project will go.

68. On October 13, 2011, the TCA Board authorized TCA staff to "develop engineering plans, complete environmental assessments and develop a financial strategy to build the 241 extension from the existing southerly terminus at Oso Parkway to the vicinity of Ortega Highway while continuing to pursue the balance of the alignment that connects to Interstate 5." The staff report for the TCA Board's October 13, 2011 action was entitled "Initial Segment of the 241 Completion Project" and stated:

While staff continues work on adjusting the full project alignment to avoid

sensitive areas or issues, the idea of constructing the project in segments was frequently raised during the outreach process. One option would be to extend the 241 Toll Road approximately four miles from its existing terminus at Oso Parkway south to the vicinity of Ortega Highway, while continuing to pursue the balance of the alignment that connects to Interstate 5.

69. Representatives of Petitioners appeared before the TCA Board on October 13, 2011 and raised a number of objections to TCA's proposal to proceed with the Tesoro Extension, including that such course would be improper piecemealing under CEQA.

70. On August 9, 2012, the TCA Board, prior to taking any action of its own to approve the Tesoro Extension or providing environmental review, authorized TCA staff to seek environmental clearances and permits from various resource agencies for the Tesoro Extension. On August 10, 2012, TCA submitted an application to the California Regional Water Quality Control Board, San Diego Region ("San Diego Water Board") for Waste Discharge Requirements for the Tesoro Extension.

71. In February 2013, TCA prepared an Addendum to the 2006 EIR for the Foothill-South project for the Tesoro Extension. The Tesoro Extension would follow nearly the same alignment as the Foothill-South Preferred Alternative (the A7C-FEC-M) for 5.5 miles, beginning at Oso Parkway. However, it would terminate at what is now a dirt road, Cow Camp Road, just north of Ortega Highway (State Route 74). TCA claims that the Tesoro Extension will serve anticipated future development under the Rancho Mission Viejo project. But that project—if and when it is ever fully built—has its own transportation plan that fully provides for the project's circulation needs without a new six-lane tollway.

72. The Addendum does not describe what alignment the project would take south of Cow Camp Road, merely stating that the Tesoro Extension would not preclude a connection to any of the toll road alternatives previously considered by TCA. However, TCA rejected all of these alternatives as infeasible in 2006.

73. The Tesoro Extension has no independent utility or justification apart from the entire Foothill-South project. The Tesoro Extension is estimated by TCA to cost $200

million and its construction will commit TCA to the entire Foothill-South project and foreclose meaningful consideration of non-corridor alternatives, such as infrastructure and transit improvements on existing arterials and I-5. By piecemealing the environmental review of the Foothill-South project, TCA has avoided and failed to analyze the serious and controversial environmental constraints to constructing the southern portion of the route. For example, the Tesoro Extension segment stops just short of San Juan Creek and the valuable jurisdictional wetland resources known as the San Juan Creek complex. The TCA's truncation of the project also sidesteps the significant impacts on coastal zone, park, and open space resources resulting from the Foothill-South alignment or the other far-eastern alignments. By refusing to identify the route the Foothill-South project will follow south of Cow Camp Road, TCA has improperly segmented environmental review of the Tesoro Extension from review of the Foothill-South project as a whole.

74. On February 6, 2013, February 21, 2013, February 22, 2013, and February 25, 2013, Petitioners sent letters to the San Diego Water Board opposing any approvals for the Tesoro Extension. These letters stated, inter alia, Petitioners' position that no discretionary approvals of the Tesoro Extension should be given prior to the preparation of a new, supplemental, or subsequent EIR for the Foothill-South project. The February 6 letter also attached Petitioners' December 21, 2012 comments to the Federal Highway Administration opposing the improper segmentation of the Tesoro Extension for environmental review under NEPA. Petitioners' position was based on a number of grounds set forth in the letters, including, without limitation, the following:

(a) The 2008 determination by the Coastal Commission and Secretary of Commerce that the Foothill-South, as approved by the TCA in 2006, is inconsistent with the CZMA is substantial new information, a substantial change in the circumstances under which the Foothill-South is being undertaken, and will require substantial changes to the Foothill-South project, necessitating major revisions to the 2006 EIR.

(b) TCA's failure to identify how it intends to modify the project renders the project description in the 2006 EIR inaccurate, and the impacts analysis in that EIR

inadequate.

(c) The Tesoro Extension is not a project separate from the Foothill-South. TCA has stated that the Tesoro Extension is the first segment of the Foothill-South, and that it intends to build the remainder of the Foothill-South. In addition, the Tesoro Extension has no independent justification as a transportation project, as it terminates in what is today a dirt road, and would serve a development that does not yet exist, whose buildout is speculative, and that would provide an access road in the same location that would serve the development better than a limited access toll road. CEQA requires environmental review of the entire Foothill-South project, so that the impacts of the whole project are known, and alternatives considered, before resources are irretrievably committed to the initial segment.

(d) Substantial new information has become available showing new significant impacts or a substantial increase in the severity of impacts previously analyzed that relate directly to the impacts of the Tesoro Extension, including, without limitation, information showing precipitous decline in coastal cactus wren populations since 2006.

(e) The Addendum prepared by TCA does not address the new information, new circumstances, or changes to the project described above.

75. Prior to approving the Tesoro Extension, the TCA was in possession of the above-referenced letters submitted by Petitioners to the San Diego Water Board.

76. On February 20, 2013, February 25, 2013, and March 29, 2013, TCA sent letters to the San Diego Water Board responding to Petitioners' February 6, 21, 22, and 25 letters. In these letters, TCA responded directly to Petitioners' comments that CEQA requires TCA to prepare new or supplemental environmental review of the Foothill-South before any discretionary approvals of the Tesoro Extension can be made.

77. TCA deprived the public of a meaningful opportunity to review and comment on the Addendum and supporting documents in the San Diego Water Board proceedings. TCA did not make the Addendum available to the public on its website or otherwise, and did not provide the Addendum to the San Diego Water Board until on or about February 19, 2013, only a few business days prior to the close of the Water Board's written

public comment period. The Water Board posted the Addendum on its own website on February 19, 2013, leaving no meaningful opportunity for public review and comment on the document. The TCA did not provide the traffic analysis supporting the Addendum to the Water Board. On February 22, 2013, Petitioners made a request to TCA pursuant to the California Public Records Act for the traffic analysis supporting the Addendum. TCA did not provide the Tesoro Extension traffic analysis to Petitioners until March 12, 2013, well after the required time to do so under the Public Records Act, and only one day before the San Diego Water Board hearing on the matter on March 13, 2013.

78. The San Diego Water Board received thousands of letters in opposition to the Tesoro Extension, and hundreds of people attended the March 13, 2013 public hearing. Legal counsel and representatives of Petitioners testified at the hearing on the CEQA issue, and TCA representatives and legal counsel responded to that testimony.

79. The San Diego Water Board did not act on TCA's application at the March 13, 2013 hearing. The Water Board requested that TCA and Petitioners provide responses to specific questions relating to whether it was appropriate for the Water Board to take action on the Tesoro Extension before the TCA Board had taken action on the Addendum and the project. The TCA and Petitioners each submitted letters to the San Diego Water Board on March 29, 2013.

80. On numerous occasions, TCA assured the public, and Petitioners specifically, that TCA would provide a public workshop, an opportunity for public comment, and responses to public comment prior to taking action on the Addendum or the Tesoro Extension project. On June 29, 2012, at a meeting with Petitioners, TCA's Director of Environmental Services assured representatives of Petitioners that TCA would provide substantial public process prior to approving the Addendum, stating, on videotape, "We're going to have a public workshop and in between that public workshop we are going to circulate both the NEPA and CEQA document for public review and comment. And then we will provide response to comments on those as well." On September 25, 2012, in response to an email from a staff member of Petitioner Surfrider Foundation regarding the timing of approval of the Tesoro

Extension, the Acting Chief Executive Officer of TCA sent an email reply stating, "The permitting and environmental process is taking longer than originally anticipated. You will have plenty of notice before any decisions are made." From at least April 26, 2012, and through the date of TCA's approval of the Tesoro Extension, TCA's website stated: "After the traffic and environmental analyses are completed, there will be a public review period for the Environmental Impact Report addendum and public workshops."

81. As early as October, 2012, several representatives of Petitioners had subscribed to an email listserve found on the TCA website which offered to provide email updates about the Tesoro Extension. In addition, on March 8, 2013, Petitioners submitted a letter to TCA requesting to be provided with all notices issued by TCA for the Tesoro Extension Project.

82. Despite TCA's promises to provide public comment and workshops on the Addendum prior to approving the Tesoro Extension, the TCA Board, without explanation and with virtually no public notice, held a special meeting at noon on April 18, 2013 at which it adopted Resolution No. 2013F-005 approving the Addendum, determining that no subsequent or supplemental environmental review was required for the Tesoro Extension, and approving the conceptual design for the Tesoro Extension. The document calling the special meeting is dated April 16, 2013. Petitioners were not provided any direct notice of the meeting, and are unaware of any public notice of the meeting aside from a posting on TCA's website on or about April 18, 2013. Subscribers to the Tesoro Extension listserve were not notified of the meeting.

83. Petitioners did not become aware of the April 18 special Board meeting until they discovered the website posting on April 18, at which time Petitioners immediately e-mailed TCA objecting to the lack of adequate notice and public process, objecting to the approval of the Tesoro Extension without preparation of an SEIR for the entire Toll Road, attaching Petitioners' prior letters to the San Diego Water Board stating the basis for that objection in more detail, requesting that the letters be included in the record for the approval, and requesting that TCA continue the Special Meeting to a later date in order to provide the public an opportunity to meaningfully participate and to comment on the proposed action. The

TCA Board did not continue the meeting.

84. As a result of TCA's representations to the public and Petitioners, Petitioners reasonably believed that, prior to approval of the Tesoro Extension, the Addendum and any underlying studies would be circulated for public review and comment, that TCA would prepare written responses to such comments, and that TCA would conduct public workshops on the project. Petitioners also reasonably believed that they would receive "plenty of notice" before TCA considered formally approving the Addendum or the Tesoro Extension. TCA instead approved the Tesoro Extension in a last-minute special meeting, with no direct notice to Petitioners, virtually no notice to the public, and without holding a single public hearing. TCA also failed to circulate the Addendum for public review and comment or to hold any public workshops as promised. This calculated circumvention of the public process deprived Petitioners and members of the public of any meaningful opportunity to raise their objections to and concerns about the project or to submit evidence and comments on the substantial CEQA issues raised by the project prior to TCA's approval of the Tesoro Extension.

85. On April 22, 2013, Petitioners submitted a letter to TCA requesting that the TCA Board rescind its April 18, 2013 approvals of the Addendum and the Tesoro Extension and re-notice the meeting for a later date, in order to allow the public a full and fair opportunity to participate in the process. The TCA has not done so.

86. On April 23, 2013, TCA filed a Notice of Determination of its approval of the Tesoro Extension.

FIRST CAUSE OF ACTION

(Violations of CEQA; Reliance on Inadequate 2006 EIR and Findings)

87. Petitioners hereby reallege and incorporate paragraphs 1 through 86, inclusive.

88. TCA violated CEQA and the CEQA Guidelines by approving the Tesoro extension in reliance on the 2006 EIR and the TCA's 2006 findings in support of the Foothill-South project, which are legally inadequate.

89. CEQA requires the lead agency for a project to prepare an EIR that

complies with the requirements of the statute. Pub. Resources Code, § 21002.1.[1] An EIR must provide sufficient environmental analysis such that decision-makers can intelligently consider environmental consequences when acting on proposed projects, including cumulative impacts. § 21061; CEQA Guidelines, §§ 15003, 15130.

90. CEQA also mandates that the lead agency adopt feasible mitigation measures that would reduce or avoid any of a project's significant environmental impacts. §§ 21002, 21002.1. If any of the project's significant impacts cannot be mitigated to a less than significant level, then CEQA bars the lead agency from approving a project if a feasible alternative is available that would meet the project's objectives while avoiding or reducing its significant environmental impacts. § 21081; CEQA Guidelines, §§ 15091, 15092. CEQA also requires that mitigation measures be fully enforceable through permit conditions, agreements, or other binding instruments. CEQA Guidelines, § 15126.4.

91. CEQA further mandates that a lead agency may not approve a project that would have significant, unavoidable environmental impacts unless the agency finds that the project's benefits would outweigh its unavoidable impacts. § 21081; CEQA Guidelines, § 15093.

92. CEQA also requires that an agency's findings for the approval of a project be supported by substantial evidence in the administrative record and requires that an agency provide an explanation of how the record evidence supports the conclusion the agency has reached. § 21081.5; CEQA Guidelines, § 15091.

93. The 2006 EIR for Foothill-South certified by TCA, and relied upon in its approval of the Tesoro Extension, is inadequate and fails to comply with the requirements of CEQA and the CEQA Guidelines. Among other things, the 2006 EIR:

(a) Failed to adopt objectives that allowed for meaningful analysis of alternatives;

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[1] Unless otherwise noted, all statutory references are to the Public Resources Code.

(b) Failed to adequately disclose or analyze the Foothill-South's significant impacts on the environment, including, but not limited to, the Foothill-South's impacts on traffic and circulation, biological resources, air quality, recreational resources, water quality, visual resources, noise, coastal resources, agricultural resources, and cultural and archaeological resources;

(c) Improperly deferred impact analysis and mitigation measures;

(d) Failed to adequately mitigate Foothill-South impacts;

(e) Failed to adequately disclose or analyze the Foothill-South's significant cumulative and growth-inducing impacts;

(f) Failed to consider a reasonable range of alternatives; and

(g) Failed to adequately analyze the alternatives that were considered.

94. In addition, in approving the Foothill-South, TCA made certain findings, including findings that certain mitigation measures and alternatives were infeasible, and that the significant environmental impacts were outweighed by other considerations, that are not based on substantial evidence in the record and do not meet the requirements of CEQA. TCA relied on these invalid findings in approving the Tesoro Extension.

95. TCA prejudicially abused its discretion by approving the Tesoro Extension in reliance on the inadequate 2006 EIR and findings in support of the Foothill-South.

SECOND CAUSE OF ACTION

(Violations of CEQA; Failure to Prepare New, Subsequent, or Supplemental EIR)

96. Petitioners hereby reallege and incorporate paragraphs 1 through 95, inclusive.

97. TCA's reliance on the 2006 EIR also violates CEQA and the CEQA Guidelines because new information, changed circumstances, and necessary changes to the Foothill-South project arising after 2006 require that TCA prepare a new EIR, or a subsequent or supplemental EIR ("SEIR"), before making further discretionary approvals in connection with the Foothill-South, including the Tesoro Extension.

98. CEQA requires agencies to prepare a SEIR where substantial changes are proposed in the project which will require major revisions of the EIR, substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the EIR, or new information, which was not known at the time the EIR was certified as complete, becomes available. § 21166. An SEIR must also be prepared if new information shows that mitigation measures or alternatives previously found not to be feasible would in fact be feasible, or that there are new mitigation measures or alternatives not previously analyzed that would substantially reduce one or more of the project's significant effects on the environment. *Id.*; CEQA Guidelines, § 15162.

99. The 2008 determinations by the Coastal Commission and the Secretary of Commerce that the Foothill-South is inconsistent with the CZMA, and thus that the alignment approved by TCA in 2006 is no longer feasible, is a substantial change in the circumstances under which the Foothill-South is being undertaken. These determinations require substantial changes in the project and major revisions to the EIR. The project description in the 2006 EIR is obsolete and inaccurate and must be modified to identify a new preferred alignment south of Cow Camp Road and describe how this alignment will be connected to the Tesoro Extension. Any proposed southern alignment, and any new roadways necessary to connect this alignment to the Tesoro Extension, will have significant environmental impacts which must be fully analyzed under CEQA. A new EIR or major revisions to the 2006 EIR are required to address these changes. A new or supplemental EIR is also required to identify and analyze feasible mitigation and alternatives for the proposed alignment. Absent such a revised project description, TCA's conclusion that the project will not have new or increased adverse environmental impacts is meaningless.

100. An SEIR is also required because new information shows that the project will have new or more severe impacts than previously identified, or that new mitigation or alternatives to reduce the project's environmental impacts are feasible. This information includes, without limitation:

(a) studies performed since 2006 showing that populations of

coastal cactus wren in the area have plummeted by more than 90% in recent years and thus the impacts of the project, including those of the Tesoro Extension, on this species will be greater than previously identified;

(b) new information demonstrating that the project will adversely impact the arroyo toad, a species federally listed as endangered that is known to occur in the project vicinity, including San Juan Creek and upland habitats;

(c) information that the project will adversely impact bedload (coarse sediment) on area receiving waters and is inconsistent with the Southern Orange County Hydromodification Management Plan (Orange County 2011);

(d) information that the project will result in channel incision, bank failure, and habitat degradation in local creeks and would adversely impact San Juan Creek;

(e) new information demonstrating that there are feasible, environmentally-superior alternatives to the Foothill-South project, including the use of high-occupancy toll-roads on I-5 or new alternatives based on infrastructure improvements to I-5 and arterial highways, and that improvements to I-5 and surrounding arterial streets could achieve traffic relief equal or superior to that provided by the Foothill-South project while avoiding severe impacts to the human and natural environment;

(f) extensive supplemental information that was developed during the proceedings before the California Coastal Commission, USFWS, and FHWA showing that the previous EIR understated the project's environmental impacts, overstated its benefits, or failed to consider feasible mitigation or alternatives, including, but not limited to, an expert capacity analysis showing that the traffic benefits claimed for the Foothill-South project have been overstated; expert reports discussing Foothill-South's extensive wetlands, endangered species, habitat, water quality, and watershed impacts; expert reports on the significant fire risks posed by the project; and Coastal Commission staff documents discussing these and other impacts; and

(g) changes in critical baseline information, the regulatory

environment, and the assumptions on which the previous EIR (completed in 2005) was based, including a major recession in the housing market that affects traffic and housing development assumptions, significant increases in gas prices that affect commuting patterns and transit use, and new regulatory requirements governing air quality, greenhouse gas emissions, and transportation and land use planning.

101. The Addendum fails to address this substantial new information.

THIRD CAUSE OF ACTION

(Violation of CEQA; Improper Segmentation)

102. Petitioners hereby reallege and incorporate paragraphs 1 through 101, inclusive.

103. CEQA requires analysis of "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guidelines, § 15378(a). Public agencies are prohibited from undertaking actions concerning a proposed public project that would have a significant adverse effect, or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance for the entire project. *Id.,* § 15004.

104. TCA may not circumvent the requirement to describe and analyze the entirety of the Foothill-South by chopping the project into smaller segments and approving and analyzing only the first segment. By limiting the scope of its environmental review to the Tesoro Extension and failing to adequately analyze the impacts of the entirety of the Foothill-South project (in light of new information, changed circumstances, and changes to the project), TCA has engaged in improper segmentation of environmental review in violation of CEQA and the CEQA Guidelines.

FOURTH CAUSE OF ACTION

(Violations of CEQA; Failure to Adopt Adequate Findings)

105. CEQA requires that an agency's findings for the approval of a project be supported by substantial evidence in the administrative record and requires that an agency provide an explanation of how the record evidence supports the conclusions the agency has

reached. § 21081.5; CEQA Guidelines, § 15091,

106. In approving the Tesoro Extension, TCA adopted findings that fail to comply with the requirements of CEQA and the CEQA Guidelines, including, but not limited to, the following:

(a) the finding that the Tesoro Extension has independent utility;

(b) the finding that the Tesoro Extension would not result in new significant effects or increases in the severity of the impacts identified in the FSEIR;

(c) the finding that the modifications of the Foothill-South project proposed by the Tesoro Extension do not require the preparation of a subsequent or supplemental EIR under Public Resources Code section 21166 or CEQA Guidelines section 15162; and

(d) the finding that preparation of an Addendum is adequate under CEQA to fulfill the environmental review requirements of the Project.

107. In approving the Tesoro Extension, TCA also violated CEQA by failing to make the findings required by CEQA for the project as a whole (including modifications required to address consistency with the CZMA), including but not limited to the following:

(e) findings that describe the significant impacts of the project as a whole, as modified;

(f) findings with respect to each significant impact of the whole project, as modified, that that the impact has been fully mitigated, that proposed mitigation is within the jurisdiction of another agency and has been or will be adopted by that agency, or that the mitigation or alternatives identified in the EIR are infeasible;

(g) findings that the overriding economic, legal, social, technological, or other benefits of the project as a whole, as modified, outweigh its significant impacts on the environment.

FIFTH CAUSE OF ACTION

(Violations of CEQA; Failure to Comply With Requirements For Separate Projects)

108. Petitioners hereby reallege and incorporate paragraphs 1 through 107,

inclusive.

109. In the alternative, if the Tesoro Extension were to be treated as a project separate from the Foothill-South as TCA has contended, TCA violated the requirements of CEQA and the CEQA Guidelines that are applicable to separate projects. Because the Tesoro Extension will have substantial adverse environmental impacts, TCA was required to prepare an EIR for this project in compliance with CEQA, including an updated project description and statement of objectives, and a complete analysis of the project's environmental impacts and of potential mitigation measures and alternatives to minimize or avoid those impacts. CEQA Guidelines, §§ 15124, 15126.2, 15126.4, 15126.6. TCA failed to prepare such an environmental analysis.

110. TCA was also required to adopt the findings for the approval of the Tesoro Extension as a separate project that are required for all projects under CEQA. TCA failed to make the required findings.

111. A public agency may not use an EIR from an earlier project as the EIR for a separate, later project unless the circumstances of the projects are essentially the same and unless the agency follows the specific procedures set forth in CEQA Guidelines section 15153, including but not limited to:

(a) preparation of an initial study to determine whether the EIR would adequately describe the general environmental setting of the project, the significant environmental impacts of the project, and alternatives and mitigation measures related to each significant effect;

(b) circulation of the EIR for public review and comment pursuant to CEQA Guidelines section 15087;

(c) preparation of responses to public comments;

(d) certification of the EIR; and

(e) approval of findings pursuant to CEQA Guidelines sections 15091 and 15093, including a statement of overriding considerations.

112. TCA may not rely on the 2006 EIR in approving a project separate from the

Foothill-South unless it follows all of the procedures set forth in CEQA Guidelines section 15153. TCA failed to comply with these requirements in approving the Tesoro Extension. Among other things, TCA failed to:

(a) prepare an initial study to determine whether the EIR would adequately describe the general environmental setting of the project, the significant environmental impacts of the project, and alternatives and mitigation measures related to each significant effect;

(b) recirculate the 2006 EIR for public review and comment pursuant to CEQA Guidelines section 15087;

(c) prepare responses to public comments;

(d) certify the recirculated EIR; and

(e) adopt findings pursuant to CEQA Guidelines sections 15091 and 15093, including a statement of overriding considerations for the Tesoro Extension.

113. CEQA Guidelines section 15153 also prohibits a public agency from using an EIR prepared for an earlier project as the EIR for a later project if any of the conditions described in CEQA Guidelines section 15162 would require preparation of a subsequent or supplemental EIR. Because the conditions described in CEQA Guidelines section 15162 would require preparation of a subsequent or supplemental EIR to the 2006 EIR, TCA cannot simply rely on the 2006 EIR, but must prepare a new or supplemental EIR for the Tesoro Extension Project.

114. In addition, Public Resources Code section 21083.9 requires a lead agency to call at least one public scoping meeting for a project of statewide, regional, or areawide significance. The Tesoro Extension, as a separate project, would have, at a minimum, areawide significance. TCA failed to provide a public scoping meeting for the Tesoro Extension project.

115. In addition, TCA's Administrative Code requires TCA to hold a "public hearing at which evidence is required to be taken" before making any initial determination, finding or decision approving the alignment of a road corridor. TCA did not provide such a public hearing prior to approving the Tesoro Extension.

116. It is impossible to determine from the 2006 EIR or from the Addendum the extent or severity of the environmental impacts resulting from the Tesoro Extension alone. The Addendum's summary conclusions that construction of the Tesoro Extension will not result in greater environmental impacts than the entire Foothill-South project provide no meaningful information about the extent or the degree of severity of the Tesoro Extension's specific environmental impacts. This violates CEQA's mandate that an EIR identify the nature and extent of the impacts resulting from the approved project.

117. TCA also violated CEQA by failing to identify or adequately analyze the increased severity of certain impacts of the Tesoro Extension as a separate project, including impacts to traffic, air quality, and greenhouse gas emissions. CEQA Guidelines, §§ 15126.2, 15064.4.

118. In approving the Tesoro Extension, TCA also failed to make the findings required by CEQA, including but not limited to the following:

(a) findings that describe the significant impacts of the Tesoro Extension, as a separate project, or make clear the extent of those impacts;

(b) findings with respect to each significant impact of the Tesoro Extension as a separate project that the impact has been fully mitigated, that proposed mitigation is within the jurisdiction of another agency and has been or will be adopted by that agency, or that the mitigation or alternatives identified in the EIR are infeasible.

(c) findings that the overriding economic, legal, social, technological, or other considerations of the Tesoro Extension, as a separate project, outweigh its significant impacts on the environment. TCA may not rely on the statement of overriding considerations it adopted in 2006 for the entire Foothill-South project and at the same time assert that the Tesoro Extension is a separate project. The benefits and environmental impacts of the Tesoro Extension alone are significantly different from those of the full Toll Road Project.

119. As a result of the foregoing defects, TCA prejudicially abused its discretion in approving the Tesoro Extension by failing to meet the requirements of CEQA. Accordingly, TCA's approval of the Tesoro Extension and related Addendum must be set aside.

PRAYER FOR RELIEF

WHEREFORE, Petitioners pray for judgment as follows:

120. For alternative and peremptory writs of mandate directing TCA to vacate and set aside the approval of the Addendum, approval of the Tesoro Extension, and all related resolutions and other approval documents;

121. For alternative and peremptory writs of mandate directing TCA, prior to any subsequent action to consider approval of the Tesoro Extension, to prepare, circulate, and consider a legally adequate new, subsequent, or supplemental EIR in compliance with CEQA, to otherwise comply with CEQA, the CEQA Guidelines, and other applicable laws, and to take any other action as required by Public Resources Code section 21168.9;

122. For a temporary stay, temporary restraining order, and preliminary and permanent injunctions restraining TCA and its agents, servants, and employees, and all others acting in concert with TCA on its behalf, from taking any action to implement the Tesoro Extension, pending full compliance with the requirements of CEQA and the CEQA Guidelines;

123. For a declaration that TCA's actions in approving the Tesoro Extension and related Addendum violated CEQA and the CEQA Guidelines and that the approvals are invalid and of no force or effect;

124. For costs of the suit;

125. For attorneys' fees as authorized by Code of Civil Procedure section 1021.5 or any other provision of law; and

126. For such other and future relief as the Court deems just and proper.

DATED: May 22, 2013 SHUTE, MIHALY & WEINBERGER LLP

By: _____
WILLIAM J. WHITE

Attorneys for All Petitioners

475683.13

VERIFICATION

I, Dan Silver, declare as follows:

I am the Executive Director of Endangered Habitats League, one of the Petitioners in this action, and am authorized to execute this verification on Petitioners' behalf. I have read the foregoing Petition for Writ of Mandate and know the contents thereof. All facts alleged in the above Petition, not otherwise supported by exhibits or other documents, are true of my own knowledge, except as to matters stated on information and belief, and as to those matters I believe them to be true. I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed this 21st day of May, 2013, in Los Angeles, California.

Dan Silver

482152.1

Exhibit A

EXHIBIT

Exhibit A

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: (415) 552-7272 F: (415) 552-5816
www.smwlaw.com

WILLIAM J. WHITE
Attorney
white@smwlaw.com

May 20, 2013

Via Federal Express

Foothill/Eastern Transportation Corridor Agency
125 Pacifica
Irvine, CA 92618

Board of Directors of the Foothill/Eastern Transportation Corridor Agency
125 Pacifica
Irvine, CA 92618

Re: Notice of Commencement of Litigation Challenging Approval of the Tesoro Extension Project and Addendum to the South Orange County Transportation Infrastructure Improvement Project Final Subsequent Environmental Impact Report, State Clearinghouse Number # 2001061046

Dear Foothill/Eastern Transportation Corridor Agency and Board of Director Members:

Please take notice that California State Parks Foundation, Endangered Habitats League, Natural Resources Defense Council, Laguna Greenbelt, Inc., California Coastal Protection Network, Sea and Sage Audubon Society, Orange County Coastkeeper, Surfrider Foundation, Sierra Club, and National Audubon Society dba Audubon California will file suit against the Foothill/Eastern Transportation Corridor Agency and its Board of Directors for failure to observe the requirements of, inter alia, the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000 et seq., in the administrative process that culminated in the April 18, 2013 approvals of the Tesoro Extension Project and Addendum to the South Orange County Transportation Infrastructure Improvement Project Final Subsequent Environmental Impact Report, State Clearinghouse Number # 2001061046, adoption of the findings of the Addendum, and all related actions. This notice is given pursuant to Public Resources Code section 21167.5.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

William J. White

PROOF OF SERVICE

At the time of service, I was over 18 years of age and **not a party to this action**. I am employed in the City and County of San Francisco, State of California. My business address is 396 Hayes Street, San Francisco, California 94102.

On May 20, 2013, I served true copies of the following document(s) described as:

LETTER DATED MAY 20, 2013 RE NOTICE OF INTENT TO SUE

on the parties in this action as follows:

Foothill/Eastern Transportation
Corridor Agency
125 Pacifica
Irvine, CA 92618

Board of Directors of the Foothill/Eastern
Transportation Corridor Agency
125 Pacifica
Irvine, CA 92618

BY FEDEX: I enclosed said document(s) in an envelope or package provided by FedEx and addressed to the persons at the addresses listed in the Service List. I placed the envelope or package for collection and overnight delivery at an office or a regularly utilized drop box of FedEx or delivered such document(s) to a courier or driver authorized by FedEx to receive documents.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on May 20, 2013, at San Francisco, California.

Sean P. Mulligan

Exhibit B

EXHIBIT

Exhibit B

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: (415) 552-7272 F: (415) 552-5816
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WILLIAM J. WHITE
Attorney
white@smwlaw.com

May 22, 2013

Kamala Harris
Attorney General
State of California
1300 I Street
Sacramento, CA 95814

Re: Notice of Filing CEQA Litigation:
California State Parks Foundation, et al. v. Foothill/Eastern Transportation Corridor Agency, et al.

Dear Attorney General Kamala Harris:

Enclosed please find a copy of the Verified Petition for Writ of Mandate in the above-entitled action. The petition is provided to you in compliance with Public Resources Code section 21167.7 and Code of Civil Procedure section 388. Please acknowledge receipt.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

William J. White

Enclosures: Verified Petition for Writ of Mandate

481810.1

EXHIBIT C

KAMALA D. HARRIS
Attorney General of California
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Attorneys for Petitioner

EXEMPT FROM FILING FEES PURSUANT TO GOVERNMENT CODE SECTION 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN DIEGO, NORTH COUNTY DIVISION

THE PEOPLE OF THE STATE OF CALIFORNIA, ex rel. ATTORNEY GENERAL KAMALA D. HARRIS, Petitioner, v. **FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY, a joint powers authority; FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY BOARD OF DIRECTORS; and DOES 1 through 20, inclusive,** Respondents.	Case No: **THE PEOPLE OF THE STATE OF CALIFORNIA'S PETITION FOR WRIT OF MANDATE** **(California Environmental Quality Act, Pub. Resources Code, §§ 21168, 21168.5; Code of Civ. Proc., §§ 1085, 1094.5)**

INTRODUCTION

1. The People of the State of California, ex rel. Attorney General Kamala D. Harris (Petitioner, or the People), bring this action challenging the Foothill/Eastern Transportation Corridor Agency and its Board of Directors' (collectively, TCA or Respondents) approval of the Tesoro Extension, a roughly five-mile long extension of State Route 241 and the first segment of the six-lane, sixteen-mile Foothill South Toll Road (Foothill South) that TCA approved in 2006. TCA approved the Tesoro Extension in violation of the California Environmental Quality Act (CEQA). (Pub. Resources Code, §§ 21000 et seq.). Among other CEQA violations, TCA failed to: accurately and completely describe the project; identify and analyze all of the project's environmental impacts; prepare a subsequent or supplemental environmental impact report for the Tesoro Extension; analyze reasonable alternatives to the Tesoro Extension; adopt a Statement of Overriding Considerations for the Tesoro Extension's significant and unmitigated environmental impacts; and hold a public scoping meeting for the Tesoro Extension.

2. The Tesoro Extension is and always has been—in TCA's words—the "Initial Segment of the 241 Completion Project [i.e., the Foothill South]" and part of that "project" for CEQA purposes. Because the California Coastal Commission and United States Secretary of Commerce (Secretary) deemed the Foothill South to be inconsistent with California's Coastal Management Program, halting its construction, TCA is now attempting to build the project segment by segment.

3. Other than the first five miles (i.e., the Tesoro Extension), TCA has not identified a new alignment for the Foothill South—much less analyzed the environmental impacts thereof. TCA's failure to treat the entire Foothill South as the CEQA project is a classic example of "piecemealing" and violates one of CEQA's most fundamental principles: a lead agency must engage in careful analysis, fully open to the public, of an entire project's environmental impacts from start to finish. TCA's failure to identify a new alignment reveals that TCA has not abandoned its ultimate goal: to build the entire Foothill South through to Interstate 5, bisecting San Onofre State Beach.

4. Contrary to decades of evidence evincing its intent to complete the Foothill South, TCA now purports that it has no definitive plan for the Foothill South and that the Tesoro Extension is a revised, standalone project (not a segment of the Foothill South). TCA contends that the Tesoro Extension has independent utility and would provide its own transportation-related benefits. At the same time, however, TCA has not revised the Foothill South's project purpose or objectives for the Tesoro Extension—notwithstanding that the "new project" is ten-miles shorter than the Foothill South and would terminate at an unpaved road. TCA relies on this odd posturing to justify its piecemealing approach *and* failure to consider alternatives and mitigations measures specific to the Tesoro Extension.

5. Construction of the Tesoro Extension would serve to build momentum for the completion of the Foothill South. As planned and envisioned by TCA, the Foothill South would carve through largely undeveloped and rural land in southern Orange County and northern San Diego County—including the world-renown San Onofre State Beach park and campground, as well as multiple Native American cultural and ceremonial sites. The project would traverse the entire four miles of San Onofre State Beach's inland portion, destroying more than 320-acres of parkland (roughly 27 percent of the park's inland portion) and fragmenting the remainder. The Foothill South is an unprecedented attempt by a local agency to take California State Park lands for highway purposes.

6. With more than 2.5 million annual visitors, San Onofre State Beach is one of California's most highly visited state parks and home to several of the world's best surfing beaches. In February of 2013, California's Historical Resources Commission voted unanimously to approve the listing of San Onofre State Beach on the National Register of Historic Places. San Onofre State Beach's inland areas comprise the last remaining undeveloped coastal valley available for recreation south of Crystal Cove State Park, and its parks trails, beaches, and campgrounds serve as an important recreational resource for middle and lower-income Californians. San Onofre State Beach also provides valuable and rare upland and wetland

wildlife habitat, including habitat for eleven species listed as endangered or threatened under federal law (and one *critically-endangered* species, the Pacific pocket mouse).

7. TCA's certification of the 2006 Final Subsequent Environmental Impact Report (FSEIR) for the Foothill South and project approval resulted in the immediate filing of three lawsuits in San Diego County Superior Court, two of which were consolidated in *California State Parks Foundation v. Foothill/Eastern Transportation Corridor Agency* (Consolidated Case Nos. GIN051194 and GIN051371). Among other things, TCA's certification and approval violated CEQA because TCA did not: (1) adequately describe and analyze all environmental impacts to San Onofre State Beach, including the devastating impacts to park visitors' experiences that would be caused by the increased noise, visual blight, and infrastructure associated with the major six-lane highway; (2) consider and analyze all reasonable alternatives to the project that would have less impact on San Onofre (e.g., improvements to public transit); and (3) describe all feasible mitigation measures for the project's environmental impacts.

8. After the Coastal Commission and Secretary found that the preferred alignment for the Foothill South was illegal, the petitioners in *California State Parks Foundation* entered into an interim settlement with TCA.

9. In approving the Tesoro Extension, TCA relied heavily on the deficient environmental analysis in the FSEIR for the Toll Road. TCA prepared only a cursory Addendum to the FSEIR that was not subject to public comment and response, notwithstanding TCA's promises that extensive public participation would be provided. TCA made no effort to correct the deficiencies in the FSEIR.

10. TCA's approval of the Tesoro Extension and supporting Addendum has lead to multiple *new* CEQA violations. TCA no longer has an adequate project description for the entire Foothill South, rendering meaningful analysis of the project's environmental impacts impossible. Alternatively, assuming *arguendo* that the Tesoro Extension is a separate, revised "project," TCA has failed to: prepare a subsequent or supplemental environmental impact report; analyze reasonable alternatives to the Tesoro Extension; adopt a Statement of Overriding Considerations

for the project's significant and unmitigated environmental impacts; or hold a public scoping meeting.

11. This is an action for injunctive relief under CEQA against TCA. Petitioner seeks a writ of mandate directing Respondents to set aside their approvals of the Addendum to the FSEIR and the Tesoro Extension and provide proper environmental review in compliance with CEQA. Absent this relief, TCA will continue to construct the Foothill South segment by segment until it arrives at the "doorstep" of San Onofre State Beach.

PARTIES AND STANDING

12. Attorney General Kamala D. Harris has broad independent powers under the California Constitution and the California Government Code to participate in all legal matters in which the State of California is interested. (Cal. Const., art. V, § 13; Gov. Code, § 12511.) The California Legislature has given the Attorney General a unique role to participate in actions concerning pollution and adverse environmental effects which could affect the public or natural resources of the State of California. (Gov. Code, §§ 12600-12612.) Government Code section 12600 expressly provides that: "It is in the public interest to provide the people of the State of California through the Attorney General with adequate remedy to protect the natural resources of the State of California from pollution, impairment, or destruction." Among other things, the Foothill South will induce urban sprawl, destroy wildlife habitat, and diminish recreational opportunities. Petitioner files this Petition for Writ of Mandate pursuant to the Attorney General's independent power and duty to protect the natural resources of California from the pollution, impairment, and destruction that will result from the Foothill South and its initial segment.

13. Respondent TCA is a joint powers authority located in Orange County. TCA is organized under the authority of the Joint Exercise of Powers Act, Government Code sections 6500 et seq., and exists pursuant to a Joint Exercise of Powers Agreement among its members. Members of TCA include the County of Orange, and the Cities of Anaheim, Dana Point, Irvine, Lake Forest, Mission Viejo, Orange, Rancho Santa Margarita, San Clemente, San Juan

Capistrano, Santa Ana, Tustin, and Yorba Linda. TCA is the "lead agency" for both the Tesoro Extension and the Foothill South as that term is used in Public Resources Code section 21067. TCA has principal responsibility for conducting the CEQA review of the Tesoro Extension and Foothill South.

14. Respondent Board of Directors of the Foothill/Eastern Transportation Corridor Agency is the governing body of TCA and is responsible for planning, approving, and implementing projects within TCA's authority, including complying with state and federal law and approving the Tesoro Extension. The Board of Directors is comprised of representatives of the County of Orange and of twelve cities within County of Orange. The TCA Board and its members are sued here in their official capacities.

15. Petitioner does not know the true names and capacities of Respondents DOE 1 through DOE 20, inclusive, and thus sue said Respondents under fictitious names. Petitioners will amend this Petition to show the true names of DOE 1 through DOE 20, inclusive, when the same have been ascertained. Each of the Respondents is the agent and/or employee of Respondent TCA, and each performed acts upon which this action is based within the course and scope of its agency or employment.

VENUE AND JURISDICTION

16. Pursuant to Public Resources Code sections 21168 and 21168.5 and Code of Civil Procedure sections 1085 and 1094.5, this Court has jurisdiction to hear this matter.

17. Venue is appropriate in this judicial district, North County Division, as the People principally seek to prevent injury to real property—San Onofre State Beach—located in northern San Diego County. Moreover, the primary CEQA violations alleged herein concern the failure of TCA to describe the portion of the project that will pass through northern San Diego County and analyze the environmental impacts thereof.

18. The court's ruling in the related case, *California State Parks Foundation v. Superior Court of San Diego* (2007) 150 Cal.App.4th 826, 831, establishes that the North County

Division of the San Diego Superior Court is the appropriate forum for resolution of the issues presented herein.

STATEMENT OF FACTS

19. As most recently proposed by TCA, the six-lane, sixteen-mile Foothill South would extend State Route 241 through one of California's most environmentally-sensitive areas to Interstate 5. The last segment of the Foothill South would bisect the inland area of San Onofre State Beach in San Diego County and pass next to the park's quietest camping area, the San Mateo Campground.

20. The Tesoro Extension is the first 5.5 mile segment of the Foothill South, and is proposed to run from the current terminus of State Route 241 in the vicinity of Oso Parkway to "Cow Camp Road"—a dirt road just north of Ortega Highway. The Tesoro Extension terminates at an illogical point and would not accomplish the objectives of the Foothill South, relieving congestion on Interstate 5.

21. There is anticipated future development in the vicinity of the Tesoro Extension under the Rancho Mission Viejo project. Providing transportation-related benefits to this new development appears to be the only potential benefit of the Tesoro Extension. That development plan, however, provides for its own transportation needs: a toll-free, four-lane arterial road that would be accessible at many points, in sharp contrast to the Tesoro Extension's tolls and limited entry and exit.

TCA's Deficient Environmental Review of the Foothill South

22. The Foothill South concept was conceived of more than thirty years ago as one of several alternatives intended to alleviate existing and anticipated congestion on Interstate 5. In 1996, TCA began working with a collaborative of state and federal agencies, including the Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Federal Highway Administration (FHWA), U.S. Marine Corps Base at Camp Pendleton, and CalTrans, to coordinate environmental review of the Interstate 5 congestion-relief alternatives

under the National Environmental Policy Act (NEPA), CEQA, and section 404 of the Clean Water Act.

23. In May 2004, TCA and the FHWA prepared and circulated a joint EIR and Environmental Impact Statement (EIS) under NEPA for the Interstate 5 congestion-relief alternatives, collectively termed the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP). The purpose and objectives in the SOCTIIP EIS/EIR did not presuppose that a toll road would be the only option for reducing congestion on Interstate 5. TCA, however, added its own set of objectives—which could only be achieved through the construction of a toll road.

24. The Attorney General timely commented on the draft EIS/EIR, noting that TCA and the FHWA failed to consider a sufficient range of alternatives and mitigation measures and incompletely analyzed the project's environmental impacts. TCA and the FHWA received more than 7,000 public comments on the proposed project, evincing its controversial nature.

25. On November 18, 2005, the California Park and Recreation Commission (Park Commission) passed a resolution urging Respondents not to approve the Project because of its serious environmental impacts to San Onofre State Beach. Therein, the Park Commission made explicit findings regarding the impacts the Foothill South would have on San Onofre State Beach. Among other things, the Park Commission found that the loss of over 320-acres of parkland from the Foothill South's construction and operation would: "result in the park's fragmentation, adversely affecting the remaining acreage in the park, including the potential for recreating opportunities" and "severely impact the San Mateo campground through noise, vibration, and visual intrusion."

26. The collaborative environmental review process was never finished. Rather, in December 2005, TCA elected to prepare and circulate a draft SEIR on its own.

27. During the public comment period for the SEIR, the Park Commission and Attorney General timely commented that TCA had not addressed the shortcomings of the collaborative EIS/EIR. TCA never adequately considered the Foothill South's environmental

impacts, available and less environmentally-harmful alternatives, or feasible mitigation measures for the project's significant impacts.

28. In February 2006, TCA certified the FSEIR (without remedying the deficiencies therein) and approved the Foothill South.

29. TCA failed to address and analyze all the visual impacts that the Foothill South would have on visitors to San Onofre State Beach. Despite the enormous visual blight associated with the construction and operation of a major six-lane highway through one of California's most visited states parks, the FSEIR does not propose effective mitigation for visual impacts.

30. TCA also fails to adequately address noise impacts in the FSEIR. TCA fails to consider that the recreational character of the campground will be altered forever by the constant noise from the Foothill South. Because TCA has failed to accurately describe noise impacts, no suitable mitigation measures have been proposed.

31. The San Mateo campground, which the Foothill South would run within 200 feet of, is the quietest campground in the park precisely *because* of its distance from traffic. The tranquil San Mateo camping experience will be ruined by the Foothill South. Indeed, the Parks Department has stated that it will abandon the entire San Mateo campground if the Foothill South is constructed (an impact TCA never considered).

32. TCA also failed to adequately describe how the loss of recreational property will be addressed through mitigation measures. Indeed, TCA contemplates *negotiations* about mitigation *at a future date*, a self-serving assertion that does not comport with the requirements or spirit of CEQA.

33. The FSEIR also fails to adequately describe the socioeconomic impacts of the Project, including among other things, the displacement of recreation resources, the loss of 320-acres of park property, and the substantial degradation and/or destruction of one of the only low-cost lodging alternatives in the area. These impacts will be borne disproportionately by people of low and middle-income. TCA has ignored the fundamental policy of environmental justice.

34. The certification of the FSEIR was accompanied by the approval of a (deficient) Statement of Overriding Considerations, though Respondents had not described all environmental impacts of the Project nor considered all feasible mitigation for those impacts. In its Statement of Overriding Considerations, TCA attempts to justify the Foothill South's myriad unmitigated, significant environmental impacts by touting the purported congestion benefits specific to the *entire* project.

TCA Was Forced to Halt Development of the Foothill South

35. In March 2006, the Park Commission and the Office of the Attorney General (Attorney General) filed a petition for writ of mandate in the North County Division of San Diego Superior Court alleging three causes of action under CEQA and seeking a writ directing Respondents to set aside their CEQA and project approvals and prepare and circulate a revised FSEIR comporting with CEQA's requirements.

36. The Park Commission and Attorney General's Petition was consolidated with another petition for writ of mandate filed by a coalition of non-governmental environmental organizations, including the Surfrider Foundation, Natural Resources Defense Council, Endangered Habitats League, Sierra Club, California State Parks Foundation, Sea and Sage Audubon Society, and Laguna Greenbelt, Inc. (collectively, Environmental Groups). The consolidated matter is captioned *California State Parks Foundation v. Foothill/Eastern Transportation Corridor Agency*.

37. The Coastal Commission must determine whether any project requiring a permit under section 404 of the Clean Water Act is consistent with California's Coastal Management Program.

38. After a public hearing at the Del Mar Fairground attended by more than 3,000 people, the largest turnout for any meeting in the Coastal Commission's thirty-six year history, the Coastal Commission determined that the Foothill South was inconsistent with Coastal Management Program policies related to surfing, public access, environmentally-sensitive habitat areas, air quality, and wetlands.

39. TCA appealed the Coastal Commission's consistency determination to the Secretary. The initial public meeting slated to occur on the University of California, Irvine's campus was rescheduled after the university notified the Secretary that it feared the expected crowd might overwhelm the university auditorium's 5,000-person plus capacity.

40. The Secretary sustained the Coastal Commission's objection to the Foothill South, thereby barring other federal agencies from issuing licenses or permits for the project.

41. Eventually, because construction of the Foothill South was precluded by the decisions of the Coastal Commission and the Secretary, the Environmental Groups, the Park Commission, and the Attorney General entered into an Interim Settlement Agreement (Settlement Agreement) with TCA.

42. Approving the Settlement Agreement, the court dismissed the proceedings without prejudice (subject to the right of any petitioner to reinstate the proceedings in accordance with Local Rule 2.1.13.) Pursuant to the Settlement Agreement, any petitioner may reinstate the proceedings in *California State Parks Foundation* "or otherwise pursu[e] their claims . . . at any time for any reason, including but not limited to, any action by the TCA to implement any aspect of the Project"—notwithstanding any statute of limitations or other barrier to litigation under CEQA.

The Tesoro Extension: TCA's Attempt to Piecemeal Construction the Foothill South

43. Faced with the Coastal Commission and Secretary's decision that the Foothill South was inconsistent with California's Coastal Management Program, TCA began searching for a way to begin construction of the Foothill South. Public records demonstrate TCA's intent.

44. The October 13, 2011 staff report authorizing TCA staff to begin working on the Tesoro Extension alignment was entitled "Initial Segment of the 241 Completion Project," referring to "completion" of the Foothill South. The staff report revealed TCA's motivations: "[W]hile staff continues work on adjusting the *full project alignment* to avoid sensitive areas or issues, *the idea of constructing the project in segments was frequently raised during the outreach*

process. One option would be to extend the 241 Toll Road approximately four miles from its existing terminus at Oso Parkway south to the vicinity of Ortega Highway, while *continuing to pursue the balance of the alignment that connects Interstate 5*." (TCA Staff Report No. 16, File No. 2011F-032 (October 13, 2011), p. 1.) (Emphasis added.) The agenda for the Board of Directors' October 13, 2011 meeting also referred to the Tesoro Extension as the "initial segment" of the Foothill South.

45. In February 2012, TCA's chair noted that regional planning documents should account for the construction of the entire Foothill South. (Bill Campbell, TCA Chair, letter to Hassan Ikhrata, Southern California Association of Governments, February 14, 2012, pages 8-9, 11.) The 2012 Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy provides that, while planning to build the Tesoro Extension immediately, TCA is "continuing to pursue the *balance of the alignment that connects to Interstate 5*." (Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy (2012), Transportation Conformity Analysis Appendix, p. 43.) (Emphasis added.)

46. Months later, TCA purported to have abandoned any specific plan to complete the Foothill South, vaguely stating in the Addendum that the Tesoro Extension does not preclude "any of the 19 toll road alternatives evaluated in the SOCTIIP technical reports."

47. TCA concedes, however, that it has not studied the environmental impacts of the preliminary layouts for connecting the Tesoro Extension to these alternatives. Equally troubling, TCA previously determined that each of the 19 alternatives was infeasible. The public does not know whether TCA has *truly* abandoned its plan to route the Foothill South through San Onofre; indeed, there is no way to know where the entire project will go or what its environmental impacts will be.

TCA's Deficient Environmental Review of the Tesoro Extension

48. TCA describes the "project" as: "an approximately 5.5 mile long extension of existing SR 241 from its current terminus at Oso Parkway to Cow Camp Road immediately north

of SR 74." For CEQA purposes, TCA treats the Tesoro Extension as a revision of the original Foothill South project and a standalone project (i.e., not one "piece" of the larger Foothill South).

49. TCA has revised the project to reduce it by more than ten miles and altered its terminus from Interstate 5 to the unpaved Cow Camp Road—thereby changing the project's function and environmental impacts (e.g., traffic impacts, growth-inducing impacts). Despite these substantial changes to the project, TCA concludes that only an Addendum was necessary to address "[m]inor alterations of the footprint and analysis."

50. Because TCA has drastically altered the purported "project," new mitigation measures and alternatives exist capable of lessening the impacts of the Tesoro Extension. For instance, given that TCA's new project will serve anticipated future development (rather than connecting to Interstate 5), improvements to local public transit might provide the same "benefits" without harming the environment.

51. TCA failed to consider the environmental impacts of an alternative that is already provided for in planning for the Rancho Mission Viejo project. A four-lane arterial road, "F" Street, is planned for construction when *and if* the anticipated future development occurs.

52. Despite characterizing the Tesoro Extension as a separate project with independent utility, TCA relies on the objectives, alternatives, and justifications for the *entire* Foothill South.

53. The Foothill South was intended "to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area." (See FSEIR, p. ES-22.) Formally, the project's objectives for CEQA included (among other things): "[i]mplement the Orange County MPAH by completing the transportation corridor system in south Orange County, between existing SR-241 and I-5"; "[m]inimize through traffic use of the existing arterial highway network in south Orange County by diverting traffic that cannot be accommodated on I-5 to a transportation corridor level facility rather than arterial highways"; "[p]rovide an alternative access route between south Orange County and central and northeastern Orange County to serve existing and developing

employment centers and major attractions"; *and* "[p]rovide an alternative access route between south Orange County and central and northeastern Orange County for emergency evacuations and emergency service providers." (Id., p. ES-22, 23.)

54. The Tesoro Extension cannot accomplish the purpose and objectives of the Foothill South. It is a proverbial "road to nowhere" terminating at an unpaved road. Though TCA's post-hoc traffic analysis indicates that the Tesoro Extension will result in a very small reduction of "peak hour congestion" on Interstate 5, TCA expressly rejected alternatives in the FSEIR that did not extend beyond the area of Ortega Highway (e.g., the Far East Corridor-Ortega Highway Variation Alternative) because they did not connect to Interstate 5 and performed poorly in traffic analyses.

55. TCA has not formally revised the project purpose or objectives in the Addendum, nor has TCA considered newly-feasible alternatives to the Tesoro Extension.

56. TCA concedes that the Tesoro Extension will have significant and unmitigated environmental impacts, including (but not limited to) impacts to aesthetics, air quality, and biological resources, but TCA has not adopted a revised Statement of Overriding Considerations for the Tesoro Extension. Notably, the Tesoro Extension will have significant and unmitigated impacts on six territories of the threatened coastal California gnatcatcher.

TCA Promised, But Did Not Provide, Meaningful Public Review of the Tesoro Extension

57. In light of the thousands of attendees at public hearings, the tens of thousands of comments received, and the significant media attention centering on the Foothill South, TCA was well aware of the public's interest in its plans for constructing a toll road in southern Orange County and northern San Diego County.

58. More recently, the Regional Board received *thousands* of comments letters regarding TCA's application for approval of waste discharge requirements for the Tesoro Extension. Hundreds of people attended the Regional Board's initial public hearing on waste discharge requirements permitting for the Tesoro Extension.

59. TCA was also aware that the Environmental Groups and the Attorney General were interested in TCA's plans for the Tesoro Extension; both requested CEQA-related notices.

60. TCA promised the public that it would provide multiple public workshops, opportunity for public comments, and responses to public comments regarding the Tesoro Extension.

61. For at least several months prior to TCA's April 18, 2013 approval of the Tesoro Extension, TCA's Tesoro Extension webpage provided that "[a]fter the traffic and environmental analyses are completed, there will be a public review period for the SEIR addendum and public workshops." The webpage contained this promise even on the day TCA approved the Addendum and Tesoro Extension. TCA did not make its traffic analysis publicly available prior to April 18, 2013.

62. Similarly, TCA's Tesoro Extension webpage provided the public with an opportunity to receive e-mail updates about the Tesoro Extension, but TCA provided no notice of its public meeting on the Tesoro Extension through this email listserve.

63. On June 29, 2012 and again on September 25, 2012, TCA assured members of the Save San Onofre Coalition that it would offer public workshops, responses to public comments, and advance notice of any decisions on the Tesoro Extension.

64. Because the public relied on these representations, TCA approved the Tesoro Extension without any meaningful public involvement.

65. The Addendum was not available to the public *until the Regional Board* posted the Addendum on its website one week prior to the date scheduled for the waste discharge requirements hearing.

66. On March 15, 2013, the Attorney General requested CEQA notices for the Tesoro Extension pursuant to section 20192.2 of the Public Resources Code, as well as a copy of the Addendum and any "analyses supporting the Addendum." TCA replied more than three weeks later, by a letter dated April 8, 2013. TCA provided *old* CEQA notices pertaining to the FSEIR

and approval of the Foothill South, as well as a copy of the Addendum. None of the analyses supporting the Addendum were provided, nor were they made publicly available in any forum.

67. On April 18, 2013, after (purportedly) posting a Meeting Agenda forty-eight hours in advance, TCA's Board of Directors approved the Addendum and a "conceptual design" for the Tesoro Extension during a special meeting. TCA concluded that no further environmental review was required for the Tesoro Extension.

68. On April 23, 2013, TCA filed a Notice of Determination of its approval of the Tesoro Extension.

69. TCA was required to mail the Notice of Determination for the approval to the Attorney General within five calendar days of its April 18, 2013 approval. (Pub. Resources Code, § 21167.) On April 26, 2013, the Attorney General sent a follow-up request to TCA reminding TCA of its obligation to mail the Notice of Determination and of its failure to provide the environmental analyses supporting the Addendum prior to the approval. TCA did not respond to this request until two weeks later, on May 10, 2013. TCA failed to timely mail the Notice of Determination.

70. The Tesoro Extension is a project of regional and area-wide (if not statewide) significance pursuant to section 21083.9 of the Public Resources Code and section 15206 of the CEQA Guidelines. The six-lane, 5.5 mile Toll Road could cause significant effects on the environment beyond the county in which the project will be located. The project will also have substantial effects on sensitive wildlife habitats, including the habitat of the threatened California Gnatcatcher. Yet, TCA failed to provide a public scoping meeting for the Tesoro Extension.

A Writ of Mandate is the Appropriate Remedy

71. Unless restrained by the Court, Respondents will proceed with constructing the first segment of the Foothill South without complying with the requirements of CEQA and without considering any public comments on this highly-controversial project. If construction of the Tesoro Extension proceeds without compliance with this law, Petitioner will suffer great and irreparable harm. Petitioner has no plain, adequate and speedy remedy at law.

72. TCA has misinformed the public and Petitioner regarding its plans for public participation in environmental review of the Tesoro Extension, and Petitioner relied on those misrepresentations. Accordingly, TCA has effectively precluded meaningful public participation in the environmental review of the Tesoro Extension.

73. Pursuant to section 21177, subdivision (d) of the California Public Resources Code, Petitioner is not required to have participated in TCA's administrative proceedings to bring this action.

74. Petitioner has complied with the requirements of Public Resources Code section 21167.5. A copy of the written notice provided to TCA and a proof of service, as required by that provision, is attached hereto as Exhibit A.

75. Petitioner will comply with the requirements of Public Resources Code section 21167.6 by concurrently filing a notice of its election to prepare the record of administrative proceedings relating to this action.

STATUTORY AND REGULATORY OVERVIEW

76. CEQA requires governmental agencies at all levels "to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment." (Pub. Resources Code, § 21001, subd. (g).)

77. Public agencies "should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." (Id., § 21002.)

78. "The purpose of an environmental impact report [EIR] is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." (Id., § 21002.1.)

79. More generally, an EIR serves "to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment." (Id., § 21061). One of CEQA's fundamental goals is to foster informed

decision-making; an EIR must also inform the public about the project and its impacts. (Cal. Code Regs., tit. 14, § 15003.)

80. A lead agency must hold a scoping meeting when a project is of statewide, regional, or area-wide significance. (Pub. Resources Code, § 21083.9).

81. As a starting point, an EIR's project description must provide the information needed for evaluation and review of the project's environmental impacts. (Cal. Code Regs., tit. 14, § 15124.) Among other things, a project description must provide "[a] clearly written statement of objectives [that] will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." (Id.)

82. California Code of Regulations, title 14, section 15126.6 requires that an EIR "describe a reasonable range of alternatives to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant impacts of the project." "The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (Id., § 15126.6, subd. (b).)

83. California Code of Regulations, title 14, section 15126.2 requires that an EIR identify the significant environmental impacts of the project, including direct and indirect impacts. California Code of Regulations, title 14, section 15126.4 requires that an EIR describe all feasible measures that can minimize significant adverse impacts of the project. CEQA does not allow an agency to defer analysis of mitigation measures until some future time.

84. "An agency shall prepare a statement of overriding considerations . . . to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment." (Cal. Code Regs., tit. 14, § 15021, subd. (d).)

85. CEQA requires that a subsequent or supplemental environmental impact report is be prepared when: "[s]ubstantial changes are proposed in the project which will require major revisions of the environmental impact report"; "[s]ubstantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report," or when "[n]ew information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available." (Pub. Resources Code, § 21166).

86. Among other things, the CEQA Guidelines provide that a subsequent or supplemental EIR must be prepared when "[n]ew information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete" shows that: "[m]itigation measures or alternatives previously found not to be feasible [that] would in fact be feasible and would substantially reduce one or more significant effects of the project" *or* "[m]itigation measures or alternatives which are considerably different from those analyzed in the previous EIR [that] would substantially reduce one or more significant effects on the environment." (Cal. Code Regs., tit. 14, § 15162).

87. CEQA also requires that "a lead agency . . . make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project" and analyze the significance of those impacts on the environment." (Id., § 15064.4.)

FIRST CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Adequately Describe the Project)

88. The allegations of paragraphs 1 through 87 are incorporated into this cause of action by reference as though fully set forth herein.

89. TCA violated the California Code of Regulations, title 14, section 15124 because it failed to adequately describe the project.

90. TCA incompletely and inaccurately describes "the project" in the Addendum as consisting only of the Tesoro Extension, the first 5.5-mile segment of the Foothill South. This description is contrary to decades of representations by TCA, as well its more recent characterizations of the Tesoro Extension as the first step toward completion of the entire Foothill South.

91. Without an adequate project description as a proper foundation for its analysis, TCA cannot possibly analyze the environmental impacts of the entire Foothill South nor meaningfully engage the public regarding those impacts.

92. TCA's actions in approving the Addendum and Tesoro Extension without adequately describing the project are arbitrary and capricious, without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

SECOND CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Adequately Analyze the Entire Project's Environmental Impacts)

93. The allegations of paragraphs 1 through 92 are incorporated into this cause of action by reference as though fully set forth herein.

94. TCA violated the California Code of Regulations, title 14, section 15126.2 because it failed to consider the environmental impacts of the entire project.

95. In addition to properly describing the entire Foothill South, TCA must identify and analyze the whole project's environmental impacts.

96. Construction of the Foothill South is a reasonably foreseeable consequence of construction of the Tesoro Extension. TCA's commitment of resources toward this segment of the Foothill South will eliminate non toll-road alternatives (such as the expansion of I-5, the arterial system, or public transportation) from consideration. Ten additional miles of six-lane

highway will undoubtedly change the scope and nature of the Tesoro Extension's environmental impacts, though the full potential for the environmental harm that may occur cannot be identified until TCA fully describes the project.

97. For instance, TCA now suggests that the Tesoro Extension may be connected with "any of the 19 toll road alternatives evaluated in the SOCTIIP Technical Reports." TCA has not, however, identified and analyzed the environmental impacts of *any* of these new connections. Similarly, in the Addendum, TCA analyzes the greenhouse gas impacts of only the Tesoro Extension.

98. TCA's actions in failing to identify and analyze the environmental impacts for the entire Foothill South are arbitrary and capricious, without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

THIRD CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Prepare a New, Subsequent, or Supplemental EIR)

99. The allegations of paragraphs 1 through 98 are incorporated into this cause of action by reference as though fully set forth herein.

100. In the alternative and assuming *arguendo* that the project is limited to the Tesoro Extension, Respondents violated section 21166 of the California Public Resources Code and California Code of Regulations, title 14, section 15 by failing to prepare a new EIR or a subsequent or supplemental EIR for the Tesoro Extension.

101. TCA has elected to prepare an Addendum for the Tesoro Extension, relying on the 2006 FSEIR, despite reducing the project's size by 10-miles and changing the terminus of the project from Interstate 5 to the unpaved Cow Camp Road. This is a substantial change to the project "which will require major revisions of the environmental impact report." (Cal. Pub. Resources Code, § 21166.)

102. The Coastal Commission and Secretary's determination that the Foothill South is inconsistent with California's Coastal Management Plan constitutes "[n]ew information of

substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous FSEIR was certified as complete." (Cal. Code Regs., tit. 14, § 15162.)

103. As a result of this new information and the dramatic changes to the project, newly-feasible and/or different mitigation measures and project alternatives capable of substantially reducing one or more significant effects on the environment exist (e.g., "F Street").

104. TCA's actions in failing to prepare a subsequent or supplemental EIR for the Tesoro Extension are without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

FOURTH CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Analyze Alternatives and Mitigation Measures for the Tesoro Extension)

105. The allegations of paragraphs 1 through 104 are incorporated into this cause of action by reference as though fully set forth herein.

106. In the alternative, and again assuming *arguendo* that the project is limited to the Tesoro Extension, TCA violated California Code of Regulations, tit. 14, section 15126.6 in failing to discuss any alternatives to the project—let alone reasonable alternatives capable of avoiding the Tesoro Extension's environmental impacts. TCA also violated California Code of Regulations, title 14, section 15126.4 in failing to describe all feasible measures capable of minimizing the significant adverse impacts of the project.

107. The Addendum is intended to address changes that TCA has made to the "project" (i.e., reducing the Foothill South to the Tesoro Extension), but TCA has failed to consider newly feasible alternatives that result from TCA's project changes. TCA must describe "a reasonable range of alternatives to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant impacts of the project." (Cal. Code Regs., tit. 14, § 15126.6.)

108. TCA proceeds as if the 5.5 mile Tesoro Extension terminating at Cow Camp Road is a project with the same objectives and purpose as the Foothill South, thus avoiding its obligation to analyze alternatives to this purportedly new and standalone project. Alternatives incapable of serving the objectives of the Foothill South may, however, be capable of serving those of the Tesoro Extension (e.g., "F Street).

109. Because TCA has failed to consider *any* alternatives to the Tesoro Extension, it has also failed to consider all feasible mitigation measures capable of lessening the Tesoro Extension's environmental impacts.

100. TCA's actions, in approving the Addendum and Tesoro Extension without adequately analyzing any reasonable alternatives and all mitigation measures that would lessen the Tesoro Extension's environmental impacts, are arbitrary and capricious, without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

FIFTH CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Adopt a New Statement of Overriding Considerations)

111. The allegations of paragraphs 1 through 110 are incorporated into this cause of action by reference as though fully set forth herein.

112. In the alternative, and assuming *arguendo* that the project is limited to the Tesoro Extension, TCA violated California Code of Regulations, tit. 14, section 15021, subd. (d) in failing to adopt a Statement of Overriding Considerations for the Tesoro Extension.

113. TCA's Notice of Determination for the Tesoro Extension curiously states that the project "will not have a significant effect on the environment"; the Addendum, however, identifies numerous significant and unmitigated environmental impacts.

114. For the reasons previously set forth herein, TCA cannot rely on the Statement of Overriding Considerations adopted for the Foothill South.

115. TCA's actions, in approving the Addendum and Tesoro Extension without adopting a Statement of Overriding Considerations, are arbitrary and capricious, without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

SIXTH CAUSE OF ACTION

(Pub. Resources Code, §§ 21168, 21168.5; Respondents' Failure to Provide a Scoping Meeting)

116. The allegations of paragraphs 1 through 115 are incorporated into this cause of action by reference as though fully set forth herein.

117. In the alternative, and setting aside TCA's legal obligation to identify and analyze the entire Foothill South's environmental impacts at once, TCA violated section 21083.9 by failing to hold a scoping meeting for the Tesoro Extension as a standalone project.

118. Pursuant to the California Code of Regulations, title 14, section [insert], a public scoping meeting must be held for projects that have "the *potential* for causing significant effects on the environment extending beyond the city or county in which the project would be located." Examples include projects capable of generating significant amounts of traffic. Because the "project" is a 5.5 mile, six-lane toll road in the vicinity of multiple cities and counties, TCA should have held a scoping meeting for the project based solely on its potential to generate significant amounts of traffic.

119. Scoping meetings must also be held for projects that would "substantially affect sensitive wildlife habitats including . . . rare and threatened species." The Tesoro Extension will impact *six* territories of the threatened coastal California gnatcatcher.

120. TCA's actions, in failing to provide a scoping meeting for the Tesoro Extension, are arbitrary and capricious, without evidentiary support, a prejudicial abuse of discretion, and are not in accordance with law.

PRAYER FOR RELIEF

WHEREFORE, Petitioner respectfully requests the following relief:

1. A peremptory writ of mandate ordering the following:

   a. Respondents vacate and set aside their approval of the Addendum and Findings for the Tesoro Extension, as well as their Approval of the Tesoro Extension;

   b. Respondents withdraw the Notice of Determination thereof;

   c. Respondents hold a scoping meeting and public workshops on the Tesoro Extension;

   d. Respondents prepare and circulate a new EIR or a subsequent or supplemental EIR for public review and comment that is in compliance with CEQA; and

   e. Respondents suspend all activity pursuant to the approval of the Addendum and Tesoro Extension that could result in any change or alternation to the physical environment until Respondents have taken all actions necessary to comply with CEQA.

2. Preliminary and permanent injunctions or a stay restraining Respondents, their agents, employees, contractors, consultants and all persons acting in concert with Respondents or on Respondents' behalf, from undertaking any construction or development, issuing any approvals or permits, or taking any other action to implement in any way the approval of the Tesoro Extension without full compliance with California law;

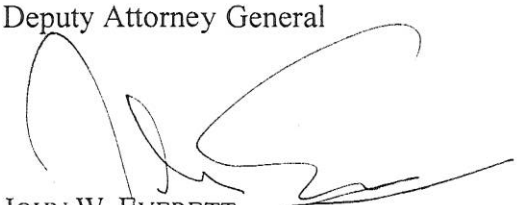
3. Petitioner's cost of suit; and

4. Such other relief as the Court deems just and proper.

Dated: May 23, 2013

Respectfully Submitted,

KAMALA D. HARRIS
Attorney General of California
JAMEE PATTERSON
Supervising Deputy Attorney General
HELEN ARENS
Deputy Attorney General



JOHN W. EVERETT
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Attorneys for the People of the State of California, ex rel. Attorney General Kamala D. Harris

EXHIBIT D

January 17, 2008

Chairman Patrick Kruer
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Foothill Transportation Corridor-South (San Onofre State Beach): Opposition to Coastal Consistency Certification (CC-018-07)

Dear Chairman Kruer and Honorable Commissioners:

On behalf of Audubon California, California Coastal Protection Network, California State Parks Foundation, Defenders of Wildlife, Endangered Habitats League, Laguna Greenbelt, Inc., Natural Resources Defense Council, Sea and Sage Audubon Society, Sierra Club, Surfrider Foundation, and the millions of members whom they represent, we write in opposition to the Consistency Certification for the proposed Foothill-South Toll Road ("Foothill-South," "Toll Road," or "Project").

This uniquely destructive project, more than any other along the southern California coast in recent memory, is antithetical in numerous significant respects to the letter, the implementing policies, and the underlying spirit of the California Coastal Act, and there is, therefore, no legitimate legal or factual basis for the consistency certification requested.

As appears in detail below, the Project, if constructed as designed and at the location proposed, would unquestionably degrade California's coastal resources, including, but not limited to, devastation of one of California's most popular state parks – the state park at San Onofre State Beach ("San Onofre") – a recreational and natural resource that serves over 2.4 million visitors each year. Indeed, if the intended purpose of the Foothill-Eastern Transportation Corridor Agency ("TCA") was to harm this irreplaceable coastal parkland, it could scarcely have done so more effectively than the Project now before the Commission. The proposed Toll Road – referred to by TCA as the "green" alternative – would bisect San Onofre through its entire four mile length, literally down its center from top to bottom, requiring closure, according to state park officials, of as much as 60% of the park. TCA takes issue with this, contending incredibly that a massive sound wall along the Toll Road's right-of-way can prevent significant harm to the park's recreational or natural values.

The Toll Road would violate numerous Coastal Act provisions and policies, including those relating to protection of environmentally sensitive habitat areas ("ESHAs"), recreational and cultural resources, wetlands, biological resources, and water quality. Among other things, the Toll Road would:

- Destroy important habitat for eleven threatened or endangered species found within the park or the surrounding San Mateo Creek watershed.

- Irreparably damage sites sacred to the Acjachemen/Juaneño people, including a village that is listed in the state Sacred Lands file, used for ceremonies and reburials, and eligible for inclusion on the National Register of Historic Places.

- Threaten the water quality of the watershed and the coastal waters to which it drains, including the world-class surfing beach known as Trestles.

- Cause the permanent loss of coastal wetlands.

- Destroy over 50 acres of undisputed ESHAs in and around the coastal zone.

- Ruin San Onofre's most popular low-cost visitor-serving recreational area – the San Mateo Campground. The campground is a critically important coastal recreational resource that *the Commission itself* required be created in the 1970s to offset the coastal impacts of the San Onofre Nuclear Generating Station.

There is simply no way to mitigate this kind of harm, no way to balance away the extent of the Project's destruction.

TCA seeks to justify its project by denying there are feasible alternatives capable of addressing the Toll Road's central purpose – i.e., relieving traffic congestion on Interstate 5 ("I-5") and in southern Orange County. Not only is this purpose immaterial to the Coastal Act, but TCA has failed to come forward with evidence demonstrating that other alternatives are infeasible.

To take just one example, TCA's own data show that a widening of the existing I-5 and selected adjacent arterials would provide congestion relief similar to the Toll Road. But this alternative was never seriously pursued by TCA. Instead, the agency proposed a footprint for the alternative that was designed to fail. Right-of-way, interchanges and detention basins were placed and designed to *maximize* residential and business displacements, which TCA has used to dismiss the alternative ever since. But TCA has never provided a single document to show that its design cannot be refined to avoid most displacements. Indeed, no report, no study, no analysis produced to date evidences any attempt by TCA to modify its design. Instead, TCA has directed its efforts at criticizing studies by others that show alternative designs do in fact exist. As discussed in this letter, these studies have been updated to address TCA's criticisms, yet they continue to show that the overwhelming majority of the purported displacements can likely be avoided by employing standard concepts of urban-context highway design.

Regardless of the existence of alternatives, however, the Project's inconsistency with Coastal Act policies is unavoidable. Faced with this problem, TCA has sought to manufacture a "conflict" among Coastal Act policies, asserting that the Toll Road would produce benefits for the coast that outweigh its impacts under the "balancing" provisions of section 30007.5. But both the conflict and benefits are illusory. The Toll Road is not being constructed to benefit the coast. It is a highway project seeking to address the traffic consequences of land use and transportation decisions made over the years in Orange County. The people of California cannot be required to sacrifice their coastal resources to address this problem. No policy of the Coastal Act favors construction of major new thoroughfares in the coastal zone. Accordingly, there is no "conflict" to even trigger section 30007.5 in the first instance. But even if the section were applied, it is beyond question that *not* constructing the Toll Road is by far the course of action "most protective" of coastal resources.

The Commission's September 21, 2007 Staff Report and recommendation that the Commission object to the consistency certification are supported by exhaustive and detailed analysis. The Report correctly concludes that the Toll Road is fatally inconsistent with the Coastal Act on numerous grounds, including:

- Destruction of environmentally sensitive habitat areas ("ESHA")
- Fill of wetlands
- Loss of San Mateo Campground and public access to San Onofre State Beach
- Potential water quality impacts to San Mateo Creek and Trestles Beach
- Loss of public views
- Potential impacts to the Village of Panhé and other cultural resources
- Availability of feasible alternatives that are consistent with the Coastal Act

Each of these conclusions would independently require a finding of inconsistency with the Coastal Act. In combination, they illustrate that the Toll Road is one of the most environmentally destructive proposals threatening California's coast today.

We have recently received a copy of TCA's January 9, 2008 response to the Staff Report. Using unusually shrill and florid language, the response appears designed more to intimidate than enlighten, and directly attacks the credibility of Commission staff without substantiation. Based on our initial review, the response document appears to be largely a rehash of the points previously made by TCA and effectively rebutted in the Staff Report. We will provide more detailed comments on the document after we have had a full opportunity to review it, but three of the more egregious misrepresentations warrant a response and are addressed in this letter:

- **Scope of Commission Jurisdiction**. TCA wrongly asserts that the Commission is limited to considering the impacts of the 2.2 mile portion of the Toll Road within the coastal zone. The Commission has clear authority to review activities outside the coastal zone that may foreseeably affect coastal resources and uses within the coastal zone.

- **Feasibility of I-5 widening.** Indulging in scare tactics, TCA continues to claim – without evidentiary support – that I-5 widening cannot occur without displacing hundreds of residences. Smart Mobility, Inc. has prepared an updated report – to

be submitted under separate cover – that addresses TCA's critiques yet continues to show that the vast majority of alleged displacements can likely be avoided.

- **Offer of Money to State Parks Department**. TCA's offer to pay $100 million to the State Parks Department will not mitigate the Project's impacts. TCA's assertion that most of the money will be needed to keep San Onofre open after 2021 is baseless. And its list of possible uses for the remainder is simply an attempt by TCA to obtain mitigation credit for improvements and restoration efforts that are already planned and underway.

Given the unmitigable harm that this Project would inflict on our coastal resources, the Commission cannot legally approve TCA's request for a consistency certification on any basis without ignoring the Coastal Act, its policies, and decades of its application by this Commission and the courts.

Requested Action: The Commission should object to the proposed consistency certification.

CONSISTENCY REVIEW JURISDICTION

The Commission has jurisdiction to review the Foothill-South Toll Road under the federal Coastal Zone Management Act ("CZMA"). 16 U.S.C. § 1456. The CZMA requires that "any applicant for a Federal license or permit, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program." *Id*. at §1456(c)(3)(A). The applicant must also submit this certification to the state's reviewing agency – in this case, the Commission. *Id*.; *see also* § 1455(d)(6); 15 CFR § 930.11(o).

The Commission reviews projects for consistency with the California Coastal Management Program, which includes the Chapter 3 policies of the Coastal Act. *See* Pub. Res. Code §§ 30008, 30330. It is the applicant's burden to provide the Commission with all of the data and information necessary to support the certification. *See* 15 C.F.R. §§ 930.57(a), 930.58(a)(1)(ii). It is also the applicant's burden to "demonstrate that the activity will be consistent with the enforceable policies of the management program." 15 C.F.R. § 930.58(a)(3). It is the Commission's responsibility to determine whether the applicant has met these burdens and, if not, to lodge a proper objection. *See* Pub. Res. Code § 30330; 15 C.F.R. § 930.63.

Contrary to TCA's repeated, erroneous assertions, the Commission's jurisdictional responsibility is not limited to reviewing the impacts of the 2.2-mile portion of the Toll Road within the coastal zone. The law is absolutely clear that the Commission has the authority to consider the impacts of the portion of the Toll Road *outside* the coastal zone that will foreseeably affect resources or uses within the coastal zone. The CZMA defines the Commission's jurisdiction to include any "activity, *in or outside of the coastal zone*, affecting any land or water use or natural resource of the coastal zone . . . ." 16 U.S.C. § 1456(c)(3)(A) (emphasis added).

Federal courts construe the term "affecting . . . the coastal zone" to include "indirect effects which may be caused by the activity and are later in time or farther removed in distance but are still reasonably foreseeable." *California ex rel. California Coastal Comm'n v. Norton*, 150 F.Supp.2d 1046, 1052 (N.D.Cal. 2001) (citation omitted). The Department of Commerce's CZMA implementing regulations mirror this language. *See* 15 C.F.R. § 930.11(g). Accordingly, federal activities "within or outside the coastal zone" that affect coastal-zone resources must be consistent with coastal laws pursuant to CZMA. *California ex rel. California Coastal Comm'n*, 150 F. Supp. 2d at 1052; *see also Millennium Pipeline Co., L.P. v. Gutierrez*, 424 F. Supp. 2d 168, 177-78 (D.D.C. 2006).

Thus, by statute, the Commission is given a broad mandate to protect the integrity of coastal resources, whether or not the action in question actually takes place in the coastal zone. As documented throughout this letter and the Commission's Staff Report, moreover, it is reasonably foreseeable that the Project as a whole – including portions of the Project located outside the coastal zone boundary – will have numerous significant and unmitigable indirect impacts on resources and uses in the coastal zone. There is no question that the Commission is required to consider such impacts.[1]

BACKGROUND

The Foothill-South Toll Road was initially proposed in 1981 as an option for alleviating existing and anticipated congestion on Interstate 5 in southern Orange County. In its present configuration, the Project would involve the construction of a six-lane highway[2] through sixteen miles of largely undeveloped lands in one of the most environmentally sensitive areas in California. The road would run through lands that are currently set aside for open space, recreational, and preservation purposes, including four miles of San Onofre as well as the inland Donna O'Neill Land Conservancy.

San Onofre State Beach, created in 1971, is one of California's most popular state parks. It receives over 2.4 million visitors per year, provides habitat for 11 endangered or threatened species, and offers low-cost recreational opportunities, including camping and surfing, for working-class families. In addition, certain recreational facilities in the park, including the San Mateo Campground, were developed as a condition of the coastal development permit for the

[1] In a footnote at the end of its January 9 response to the Staff Report, TCA declares that it "reserves" the argument that the Commission lacks jurisdiction over the Toll Road altogether. TCA reasons that Camp Pendleton is "subject solely to the discretion of. . . the Federal Government" for purposes of 16 U.S.C. section 1452(1), and is therefore not within the coastal zone. However, the *San Onofre* portion of Camp Pendleton is *not* a "federal enclave" subject to "exclusive federal jurisdiction," as TCA claims. To the contrary, the federal government has expressly ceded to the State *concurrent* jurisdiction over the park. *See* California State Lands Commission, Minute Item No. 20, *Acceptance by State of California of Retrocession of Concurrent Jurisdiction from the United States of 2,945 Acres, More or Less, of Land at Camp Pendleton Marine Base, San Diego County* (Nov. 29, 1973). Accordingly, section 1452(1) is inapplicable.

[2] TCA repeatedly mischaracterizes the project as a 4-lane highway. It is true that, initially, only 4 lanes of the facility will be operational, but it will be sized to accommodate 6 lanes, and will therefore have the footprint of a 6-lane roadway. *See* Transportation Corridor Agencies, *South Orange County Transportation Infrastructure Improvement Project (SOCTIIP): Final Subsequent Environmental Impact Report* (December 2005) (hereafter "FSEIR") at 2-3.

San Onofre Nuclear Generating Station ("SONGS") project to offset the significant loss of coastal access.

The legality of TCA's approval of the Project is being challenged in pending litigation, including two lawsuits filed by the California Attorney General. The first of these, brought on behalf of the People of California and the California State Parks Commission, is one of two lawsuits contending that TCA violated the California Environmental Quality Act ("CEQA") in approving the project. *People ex rel. Attorney General Bill Lockyer and State Park and Recreation Commission v. Foothill/Eastern Transportation Corridor Agency et al.,* No. 06-GIN051371 (S.D. Super. Ct. filed March 23, 2006). The second was filed on behalf of the Native American Heritage Commission – at the request of Acjachemen people – for violation of laws protecting Native American resources. *Native American Heritage Commission v. Foothill/Eastern Transportation Corridor Agency et al.,* No. 06-GIN051370 (S.D. Super. Ct. filed March 23, 2006). These lawsuits spotlight TCA's failure to adequately disclose to the public the environmental and cultural impacts of the Project, including impacts to a range of coastal resources.

The pending CEQA litigation also challenges TCA's failure to seriously consider alternatives to the Toll Road that would achieve similar traffic benefits without any of the impacts to San Onofre and coastal resources. These include alternatives focused on the widening of I-5. TCA has continually insisted that widening the I-5 would cause hundreds of residential and business displacements, and is therefore infeasible. But its design for these alternatives makes no effort whatsoever to minimize displacements – to the contrary, it appears to intentionally maximize them. As discussed in Section II below, and in the revised report by Smart Mobility, the overwhelming majority of the purported displacements can likely be avoided by redesigning interchanges and other needed improvements in a way that takes into account the roadway's urban location.

The conservation community has made the protection of San Onofre State Beach from the Toll Road a top priority. The Project not only threatens irreplaceable coastal resources, *but would represent the first time in California that state park lands were taken by a local governmental entity for a major infrastructure project*. Allowing this project to proceed would set a dangerous precedent, threatening coastal parks and open space everywhere in the State. Further, as discussed below, the Project stands in direct conflict with the requirements of the Coastal Act. Accordingly, the Commission must object to TCA's consistency certification.

DISCUSSION

I. THE PROJECT IS INCONSISTENT WITH THE CALIFORNIA COASTAL ACT

The proposed project would result in significant and unmitigable impacts to coastal zone resources in violation of the Coastal Act. The Toll Road poses a severe threat to the coastal environment and to the State's coastal park resources. The chosen alignment would run primarily through open space that has been set aside for preservation purposes, including four miles through San Onofre State Beach. As a result, the Project would have devastating effects on coastal resources. Among other things, the Project would:

- **Permanently Eliminate EHSA**. Most of the coastal-zone land impacted by the Project is ESHA, including nearly 50 acres of coastal sage scrub. The Project would jeopardize numerous endangered and threatened species including the coastal California gnatcatcher, Pacific pocket mouse, arroyo toad, southern steelhead, and tidewater goby.

- **Destroy San Mateo Campground**. The Project would irrevocably destroy the quiet, natural camping experience provided by this extremely popular, low-cost coastal recreational facility – an experience that is irreplaceable anywhere in the region. The Commission mandated the creation of the campground as beach access mitigation for SONGS, and today it enables over 100,000 visitors annually to access Trestles and the other coastal areas within San Onofre.

- **Harm Trestles Beach.** The Project would threaten wave formation at this world-famous surfing beach and would degrade and diminish public access to the beach.

- **Fill Wetlands and Degrade Water Quality.** The Project would directly and indirectly impact wetlands associated with San Mateo Creek – one of the last remaining high-integrity watersheds along Southern California's coast – and degrade the creek and its estuary through erosion.

These impacts give rise to inconsistencies with Coastal Act policies in virtually every resource category. Each of these inconsistencies is an independent ground for objecting to the consistency certification.

A. <u>Environmentally Sensitive Habitat Areas</u>

Environmentally Sensitive Habitat Areas. Coastal Act § 30240: *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed in those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas . . . shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat . . . areas.*

Section 30240 affords environmentally sensitive habitat areas ("ESHAs") three levels of heightened protection. First, section 30240(a) strictly prohibits any uses within an ESHA except those that are "dependent" on the resource. *See Bolsa Chica Land Trust v. Superior Court*, 71 Cal. App. 4th 493, 506-07 (1999) ("*Bolsa Chica*"); *Sierra Club v. Cal. Coastal Comm'n*, 12 Cal. App. 4th 602, 611 (1993) ("*Pygmy Forest*") ("[D]evelopment in ESHA areas themselves is limited to uses dependent on those resources . . . ."). Second, even if a use is dependent on the resources in an ESHA, section 30240(a) prohibits any significant disruption of the ESHA's habitat values. Finally, section 30240(b) requires that development outside but adjacent to ESHAs be sited and designed to prevent impacts that would significantly degrade those areas.

As discussed below, the Foothill-South is not a use that is dependent on any ESHA resources, and is therefore a prohibited use within an ESHA. Moreover, regardless of how the use is characterized, the Toll Road's direct occupation, destruction, and disruption of habitat values in the ESHAs within San Onofre render it inconsistent with section 30240(a).

ESHAs Within San Onofre. It is not disputed that the Foothill-South project will directly occupy and thereby destroy ESHAs within the coastal zone. Section 30107.5 of the Coastal Act defines an ESHA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed by human activities and developments."

Habitat within San Onofre meets both elements of this statutory definition and therefore must be designated as ESHA. *See Pygmy Forest*, 12 Cal. App. 4th at 617. Indeed, TCA effectively concedes in its application materials that the coastal sage scrub and gnatcatcher habitat impacted by the Project is ESHA.[3] Nor does TCA dispute that habitat within the project area occupied by or suitable for steelhead trout, tidewater goby, least bell's vireo, and arroyo toad similarly must be considered ESHA.[4] Moreover, as detailed herein, crucial expansion habitat for the critically endangered Pacific pocket mouse within the coastal zone also must be considered ESHA.

Numerous plants, animals, and habitats within the coastal areas of San Onofre are both rare and especially valuable due to their roles in the coastal ecosystem and thus satisfy the first element of the ESHA definition in section 30107.5. These areas contain a rare, largely intact coastal assemblage of riparian habitat, wetlands, marsh vegetation, estuarine environs, coastal sage scrub, and other upland areas which indisputably qualify as ESHA. Coastal sage scrub provides essential habitat for the threatened California gnatcatcher, provides potential recovery habitat for the critically endangered Pacific pocket mouse, and is used for upland foraging, dispersal and wintering habitat by the endangered arroyo toad.[5] Riparian and wetland areas are also vital for the toad. The southernmost known population of the endangered steelhead trout inhabits San Mateo Creek and its estuary, and the endangered tidewater goby makes its home in the San Mateo lagoon.

This particular ESHA complex is especially biologically valuable and unique because coastal wetland-upland mosaics, like the area along San Mateo Creek, are highly depleted in Southern California. It lies at the mouth of the most pristine – and the only undammed – major coastal watershed in California south of Ventura. According to an analysis by the Conservation Biology Institute of watersheds between Los Angeles and the Mexican border, the San Mateo Creek and San Onofre Creek watersheds have the highest ecological integrity,[6] as measured by

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[3] *See* Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor – South (FTC-S)*, March 23, 2007 (hereafter "*Consistency Application*") at 59.
[4] *See Consistency Application* at 63-64.
[5] *See* W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, August 17, 2007 at 2-3.
[6] Ecological integrity refers to the degree to which the natural characteristics and functions of a watershed are intact or unmodified by humans.

the amount of land cover changes from development and roads, of any coastal watersheds.[7] Thus, these two watersheds have the highest level of natural watershed functions in the region. A map of critical habitat previously designated by the United States Fish and Wildlife Service for endangered and threatened species shows an amazing confluence of these designations in and around the coastal zone at lower San Mateo Creek, making it a true "hotspot" of biological diversity.[8] All of these characteristics are indicative of rare and valuable habitat that must be protected as ESHA. *See, e.g., Pygmy Forest*, 12 Cal. App. 4th at 613-15.

These ESHAs would be directly occupied and significantly impacted by the loss of almost 50 acres of coastal sage scrub, encroachment into wetlands, and irreversible habitat fragmentation and edge effects from the Toll Road structure and operations. Furthermore, as detailed below, it is reasonably foreseeable that Toll Road construction and operation upstream from and adjacent to the coastal zone will degrade ESHA within the coastal zone.

1. **The Toll Road Is Not a Resource-Dependent Use and Is Therefore Absolutely Prohibited in EHSA, Regardless of Off-Site Mitigation**.

The Foothill-South is not a resource-dependent use. Accordingly, its construction through ESHA in San Onofre is prohibited under section 30240(a). TCA does not even attempt to address this requirement and presents no argument for why the Project might be a resource-dependent use. The Project is not, for example, a restoration-type project that would depend on coastal resources. *See, e.g., Sierra Club v. California Coastal Com. ("Batiquitos Lagoon"),*19 Cal. App. 4th 547 (1993). Accordingly, no part of the Toll Road may be constructed within an ESHA.

Yet it is undisputed that the Project would directly occupy and destroy ESHA. TCA concedes that nearly 50 acres of coastal sage scrub habitat and three gnatcatcher use areas will fall "within the project's disturbance limit" – that is, these areas will be physically occupied and destroyed by the project.[9] Indeed, as discussed in more detail below, virtually all of the coastal-zone lands disturbed by the Project qualify as ESHA.

TCA is apparently taking the position that it can construct the project in ESHA because it will provide off-site mitigation (in the form of a conservation bank located some 15-20 miles inland in another watershed, and, just recently, an offer to help fund mostly completed restoration efforts at Crystal Cove State Park, more than 20 miles away). The California courts, however, have flatly rejected TCA's approach. In *Pygmy Forest*, for example, the court clearly stated that the resource-dependent use requirement is independent of, and in addition to, any

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[7] Figure 9, Ecological integrity of watershed basins in the region, *Conservation Significance of Rancho Guejito*, Conservation Biology Institute, 2005, http://www.consbio.org/cbi/projects/show.php?page=ranchoguejito/guejito-pdf.htm (last visited January 16, 2008).

[8] *Critical Habitat for Species within San Onofre State Beach*, GreenInfo Network, 2007. As a legal matter, the federal resource agencies have determined that the Integrated Natural Resources Management Plan for Camp Pendleton has superseded previous designations of critical habitat under the Endangered Species Act. *See* 16 U.S.C. § 1633(a)(3)(B)(i). As a biological matter, however, this same habitat remains critical to the survival and recovery of the species.

[9] *Consistency Application* at 59.

requirement to prevent significant disruption of habitat. *See Pygmy Forest*, 12 Cal. App. 4th at 617. Non-resource-dependent uses simply are not allowed in ESHAs, even where mitigation measures that provide habitat protection have been formulated. *Id.* TCA's failure to show how the Toll Road qualifies as a resource-dependent use is absolutely fatal to its consistency application.

The court in *Bolsa Chica* likewise held that direct impacts to coastal ESHAs cannot be mitigated through identification of replacement habitat or "habitat values" elsewhere. Section 30240 "does not permit a process by which the habitat values of an ESHA can be isolated and then recreated in another location. Rather, a literal reading of the statute protects *the area* of an ESHA from uses which threaten the habitat values which exist in the ESHA." *Bolsa Chica*, 71 Cal. App. 4th at 507 (emphasis in original). The court observed that while section 30240 is intended to protect the habitat values of ESHAs, "the express terms of the statute do not provide that protection by treating those values as intangibles which can be moved from place to place to suit the needs of development."[10] *Id.*

Like the developer in *Bolsa Chica*, what TCA proposes here is essentially "the isolation and transfer of ESHA habitat values to more economically convenient locations." *Id.* at 508. Such a system, of course, is "completely contrary to the goal of the Coastal Act, which is to protect *all* coastal zone resources and provide enhanced protection to ESHA's." *Id.* (emphasis in original). The habitat values of the coastal sage scrub ESHA in San Onofre cannot simply be moved to a more convenient location 15 or 20 miles inland or up the coast. The Coastal Act requires that these resources be treated as unique and irreplaceable, not fungible and portable. The failure of the Project to avoid ESHA renders it inconsistent with the Coastal Act.

2. The Project Would Significantly Disrupt Habitat Values in ESHA.

As discussed above, the Project's physical occupation of ESHA is enough to render it inconsistent with section 30240(a). Moreover, the Project is also inconsistent with that section's mandate to avoid "any significant disruption of habitat values" of ESHA. The purported mitigation measures offered by TCA do not come close to replacing the loss of habitat values caused by the Project.

a. Habitat For Numerous Sensitive Species Will Be Destroyed Or Severely Impacted By the Project.

TCA wrongly claims that a number of sensitive species do not have habitat within the coastal zone or will not be significantly affected by the Toll Road. In fact, the Project would occupy and significantly disrupt the coastal-zone habitat of several species key to the biological diversity of the California coast, and would even push one critically endangered species – the

[10] This is true even if the ESHA has been compromised or degraded. *See Bolsa Chica*, 71 Cal. App. 4th at 508 ("There is simply no reference in section 30240 which can be interpreted as diminishing the level of protection an ESHA receives based on its viability. Rather, under the statutory scheme, ESHA's, whether they are pristine and growing or fouled and threatened, receive uniform treatment and protection.") (*citing Pygmy Forest*, 12 Cal. App. 4th at 617).

Pacific pocket mouse – to the verge of extinction. These species include, but are not limited to, the following:

Coastal California Gnatcatcher. Coastal sage scrub is breeding habitat for the coastal California gnatcatcher, a threatened species under the federal Endangered Species Act ("ESA"), 16 U.S.C. §§1531-1544. TCA concedes that the Toll Road will impact at least 49.75 acres of coastal sage scrub ESHA in the coastal zone alone, including three California gnatcatcher use areas of undefined acreage.[11] This area plainly qualifies as an ESHA under section 30107.5, and its loss would constitute a highly significant disruption of the biological value of the ESHA. In addition, the permanent loss of high-quality habitat immediately adjacent to the coastal zone will foreseeably affect the value of any remaining gnatcatcher habitat within the coastal zone.

The primary mitigation TCA offers to offset the loss of this ESHA is the utilization of coastal sage scrub "credits" in the agency's Chiquita Canyon Conservation Bank, located in a conservation area far inland of the coastal zone.[12] As discussed above, TCA's attempt to recreate the lost biological value of this habitat elsewhere does not cure the inconsistency with the Coastal Act. *Bolsa Chica*, 71 Cal. App. 4th at 507-08.

But in any event, Chiquita Canyon's inland location cannot replace the unique values to the gnatcatcher which derive from a maritime location. These values include higher reproductive rates, lower winter mortality, and greater resistance of the coastal sage scrub to "type conversion" to weedy species as a result of drought, fire, and exotic species invasions.[13] Thus, even if habitat preservation and restoration occurred inland, it would not compensate for the elimination of distinctive *coastal* resources nor change the fact that a major disruption of the coastal sage scrub ESHA had occurred.[14]

TCA's last-minute offer to fund restoration of 150 acres of coastal sage scrub habitat at Crystal Cove State Park is similarly ineffective. Most of the coastal sage scrub restoration that is biologically appropriate for this state park – and all that located in a maritime location – has already been completed. The remainder – only tens of acres – will occur irrespective of TCA's offer.[15] This restoration would also be in a more inland location, in the El Moro Valley, about a mile from the ocean.[16]

Neither the Crystal Cove site nor the Chiquita Canyon site can reproduce the rich mosaic of coastal estuary, marsh, lush riparian woodland, sandy soils, and associated uplands that makes San Onofre so ecologically unique. Neither site has the watershed integrity of San Onofre. Indeed, Crystal Cove contains only narrow riparian strips and is surrounded by dense development. Piecemeal actions directed at only one component of a complex

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[11] *Consistency Application* at 59.
[12] *Id.* at 60.
[13] W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, August 17, 2007 at 3.
[14] *Id.*.
[15] D. Pryor, District Ecologist, California Department of Parks and Recreation (pers. comm. Jan. 7, 2008).
[16] W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, Jan. 10, 2008 at 2-3.

ecosystem will never restore the values lost.[17] Thus, even if off-site mitigation were legally permissible, which it is not, the loss of coastal sage scrub ESHA could not be mitigated in these locations.

Pacific Pocket Mouse. TCA's analysis of potential impacts on the Pacific pocket mouse ("PPM") is deeply flawed. This species is listed as "endangered" under the ESA and as "critically endangered" – the highest threat rating short of extinct in the wild – on the International Union for the Conservation of Nature's "Red List."[18] A quintessential coastal species, its habitat is restricted to sandy soils near the Pacific Ocean. It was once thought extinct but was rediscovered in 1993. It now has documented populations at only three limited locations along the coastline, two of which are on Camp Pendleton.[19] One of these sites – San Mateo Creek – supports two small and precarious populations, one north of the creek adjacent to the coastal zone, and the other south of the creek.

The Foothill-South would directly impact the San Mateo-North population and the ESHA upon which it depends. Indeed, it would have a devastating effect on the Pacific pocket mouse, and, according to a mammalogist with extensive field experience with this species, would substantially increase its risk of actual extinction.[20] This is because the health of *each* remaining population is of critical importance. According to the Recovery Plan for the PPM prepared by the United States Fish and Wildlife Service:

- "Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies' survival. All extant populations are essential. These populations should be protected and secured from significant potential impacts."[21]

- "[F]urther losses of occupied *or potential* habitat would seriously reduce the probability of the persistence of the subspecies."[22]

- "Population persistence and expansion should be maintained by precluding actions which result in physical barriers to movement, habitat fragmentation, or an increase in edge effects."[23]

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[17] *Id.*
[18] USFWS Threatened and Endangered Species System, http://ecos.fws.gov/tess_public/SpeciesReport.do?kingdom=V&listingType=L (last visited January 16, 2008) ("USFWS Endangered Species List") and http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=A0BY (last visited January16, 2008) ("Species Profile"); 2007 IUCN Red List of Threatened Species, http://www.iucnredlist.org (last visited January 16, 2008).
[19] Wayne Spencer, Ph.D. & Robert Hamilton, *Review of Biological Resources Analysis in SOCTIIP Draft Environmental Impact Statement/ Supplemental Environmental Impact Report*, prepared for Shute, Mihaly & Weinberger (August 2004) (hereafter "*Biological Resources*") at 3.
[20] W.D. Spencer, Ph.D., *Review of Impacts to the Endangered Pacific Pocket Mouse by Eastern Alignments of the Proposed Southern Orange County Transportation Improvement Project*, Letter to US Fish and Wildlife Service, August 11, 2005 (hereafter "*Spencer 2005 Letter*") at 9.
[21] P. Brylski. PhD, et al., *Pacific Pocket Mouse Recovery Plan* (USFWS 1998) at 37, available at http://ecos.fws.gov/docs/recovery_plans/1998/980928c.pdf (last visited January 17, 2008).
[22] *Id.* at 34 (emphasis added).
[23] *Id.* at 21.

Critical to the biology of the Pacific pocket mouse is the ability to expand its numbers in good years, as this is vital to ensuring *bare survival* in bad years. Yet flying in the face of all scientific recommendations, the Toll Road would trap the San Mateo-North population in a highly constrained area between urban San Clemente and the highway. It would physically *eliminate* some currently occupied habitat, as well as a large amount of the *suitable* habitat needed for population expansion – both termed "essential" by the Recovery Plan. In addition to the direct taking, virtually all the rest of the expansion habitat would be degraded by fragmentation, loss of connectivity, and edge effects such as noise and light pollution.[24] *A significant portion of this essential expansion habitat – which qualifies as ESHA due to its special and valuable role in the ecosystem – lies within the coastal zone*.[25]

This absolute reduction in available habitat, and the resultant inability of the population to adapt to changing circumstances, severely increases the risk of extirpation of the San Mateo-North population. The number of individuals captured in different years at San Mateo-North has ranged from just 4 to 37, showing how susceptible this fluctuating population is to extirpation. In addition, the Toll Road would permanently sever connectivity between the San Mateo-North and the San Mateo-South populations. These populations are now primarily separated by two-lane Cristianitos Road and old agricultural fields, which would be difficult, but not impossible, to cross.[26] The Toll Road, however, would place an 18-inch barrier curb along the western disturbance limit of the road, permanently isolating these populations from one another.[27] It would block mice from these different groups from interbreeding and reduce the propagation of genetic diversity essential to the species' survival.[28]

TCA claims that an undercrossing will mitigate this impact, but such measures are completely experimental with respect to small mammals such as mice and there is no evidence that it would result in any mitigation of impacts to this species.[29] TCA has acknowledged elsewhere that while larger mammal species are more capable of finding and using undercrossings, smaller wildlife species may simply attempt to cross deadly road alignments directly.[30] The experimental undercrossings proposed by TCA would require these tiny creatures to find their way through culverts ranging from 95 to 525 feet in length.[31] One proposed undercrossing also seemingly leads to a detention basin for polluted runoff.[32] In addition, the Toll Road would block the PPM from accessing the former agricultural fields in Camp Pendleton, which are partially within the coastal zone and, if restored, would greatly enhance connectivity between populations.

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[24] *Spencer 2005 Letter* at 8, Attachment A.
[25] *Id*. at Attachment A.
[26] *See id.* at 8-9.
[27] BonTerra Consulting, *Pacific Pocket Mouse Resource Management Plan for the San Mateo North Population* ("*PPM Management Plan*") (Sept. 2007) at 7-8.
[28] *Spencer 2005 Letter* at 8-9.
[29] *Id.* at 9.
[30] FSEIR, vol. VI (Response to Comments) at 3-344.
[31] *PPM Management Plan* at 8.
[32] Transportation Corridor Agencies, *General Layout Plan*, Exhibit 3A, March 2007.

Small, precarious populations like that of San Mateo-North are vulnerable under best of circumstances. This is why, referring to San Mateo Creek, the Recovery Plan states, "All further actions in this area should improve ecosystem function and habitat linkage/connectivity."[33] To the contrary, the loss of *essential* habitat – which cannot be compensated for by mere management measures – plus the addition of edge effects and fragmentation, would jeopardize the very existence of this on-the-brink species.[34]

Finally, TCA's recent proposal to restore sage scrub habitat at Crystal Cove State Park will do nothing for the Pacific pocket mouse. The pocket mouse is not present at Crystal Cove, and in any event, the coastal sage scrub habitat identified for restoration at Crystal Cove lacks the sandy soils required by the pocket mouse.[35] This site could never qualify as mitigation.

Arroyo Toad. TCA fails to account for impacts to the southwestern arroyo toad, another severely endangered species. San Mateo Creek is home to one of the most important remaining populations of the arroyo toad, which breeds in gravel terraces and uses adjacent riparian habitat and uplands for aestivation and foraging. On Camp Pendleton, the species has been documented to range at least 1.2 kilometers from the streamcourse as it forages for food.[36]

Contrary to TCA's assertions, the arroyo toad *does* occupy significant habitat within the coastal zone. Indeed, according to an arroyo toad expert with extensive field experience in this very area, "Occupied and known arroyo toad habitat would be directly and significantly disrupted within the coastal zone of lower San Mateo Creek. Arroyo toads are well known as inhabiting the lower portions of San Mateo Creek, even west of I-5 (Griffin and Case 2001, Holland and Goodman 1998)."[37] This includes significant areas of coastal sage scrub in the uplands along the creek that would be lost.[38]

The coastal sage scrub uplands in the coastal zone of lower San Mateo Creek clearly qualify as ESHA due to their occupancy by this endangered species. As discussed above, the Project's grading and occupation of this ESHA is absolutely prohibited by section 30240. In addition to this direct loss of ESHA, the Project would block arroyo toad access to areas of ESHA on the other side of the highway, causing further significant disruption to its biological value.[39]

These effects continue upstream, where access to vital uplands would be blocked along important drainages in the San Mateo Creek and San Juan Creek watersheds. At the same time, the Toll Road would interfere with the necessary interbreeding between

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[33] *Pacific Pocket Mouse Recovery Plan* at 52.
[34] *Spencer 2005 Letter* at 9.
[35] *See* W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, January 10, 2008 at 2.
[36] R.E. Lovich, *Letter to California Coastal Commission*, August 16, 2007 (hereafter "*Lovich 2007 Letter*") at 2.
[37] *Lovich 2007 Letter* at 2.
[38] R.E. Lovich, *Occupied Arroyo Toad Habitat in the Coastal Zone*, Sept. 2007 (based on FSEIR Fig. 4.11-1j).
[39] *See Lovich 2007 Letter* at 4.

populations.[40] The end result would a loss in population viability for arroyo toads both within and without the coastal zone.[41]

In general, the arroyo toad is highly sensitive to habitat fragmentation, as occurs with highways. It has reliably disappeared from watersheds throughout Southern California where habitat contiguity has been lost. Only in the most intact watersheds – like San Mateo Creek and its tributaries – does it still survive.[42] "The tollroad in this location would degrade and fragment this extraordinary relict of a once-larger functional ecosystem in Southern California."[43]

As previously discussed, the arroyo toad's coastal habitat indisputably qualifies as ESHA. Foothill-South is not a resource-dependent use, and its construction will cause serious long-term loss of habitat and connectivity, substantially disrupting this ESHA's habitat value in violation of the Coastal Act. *See* Pub. Res. Code § 30240(a); *Bolsa Chica*, 71 Cal. App. 4th at 506-07. Nor does the Coastal Act permit TCA to mitigate for this disruption by creating "habitat value" elsewhere. *Id.* at 507-08. Even if it did, TCA's proposed mitigation would be woefully inadequate. TCA's measures are largely limited to temporary construction impacts and fail to address more serious long-term threats to the species. Mitigation measures referenced in the consistency application include construction management plans, mapping of arroyo toad habitat areas, fencing, surveys, relocation, and recreation of habitat after construction.[44] None of these measures, however, addresses habitat fragmentation and loss of population viability. They are "insufficient."[45] Nor does the newly proposed Crystal Cove restoration site contain the gravel terraces and intact hydrologic regimes required by the arroyo toad.[46] This restoration proposal cannot contribute to this species' viability. TCA's application thus completely fails to address a significant impact to California's coastal resources.

Southern Steelhead and Tidewater Goby. Both of these species are federally endangered,[47] and their habitats would be degraded by the Toll Road. Research on historic population sizes suggests that San Mateo Creek may have once been one of the most populated steelhead streams in the region.[48] TCA's consistency certification states that the probability of impacts on southern steelhead is extremely low because they are predicted to occur in low numbers.[49] But the San Mateo watershed is the only watershed south of Malibu Creek to support a breeding population of southern steelhead and is considered critical to recovery of this listed species.[50]

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[40] *Id*. at 3-4.
[41] *Id*.at 5.
[42] *Id.* at 4-5.
[43] *Id.* at 4.
[44] *See Consistency Application* at 64; FSEIR at 4.10-17 to 4.10-20, 4.12-32 to 4.12-34.
[45] *Lovich 2007 Letter* at 3.
[46] *See* W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, Jan. 10, 2008 at 2.
[47] *See* 71 Fed. Reg. 833 (January 5, 2006) (listing southern California coast steelhead as "endangered"); 59 Fed. Reg. 5494 (February 2, 1994) (listing tidewater goby as "endangered").
[48] Wayne Spencer, et al., *On the Global and Regional Ecological Significance of Southern Orange County: Conservation Priorities for a Biodiversity Hotspot*, Prepared for Endangered Habitats League (2001) ("*Spencer Conservation Priorities*") at 26.
[49] *Consistency Application* at 63.
[50] *Spencer Conservation Priorities* at 36.

Young steelhead (fry) are especially sensitive to fine sediments and turbidity,[51] both of which may be multiplied many times over by road construction projects.[52] Over the long term, the area of disturbance (from impervious surface and cut and fill) to the upstream portion of each of the eight subwatersheds near the mouth of the creek will be around 40% on average, which will lead to destabilization and erosion of channels.[53] The combination of disturbance of watersheds and concentration of flow in culverts is likely to cause erosion of fine sediments and destabilization of stream channels. The proposed BMPs (energy dissipation at culvert outlets and revegetation along cut and fill slopes) will not fully address impacts associated with flow concentration, increased runoff, and the potential for significant soil erosion.[54] As a result, siltation of the creek system may occur, degrading water quality and habitat conditions.[55]

Tidewater gobies are found only in the coastal wetlands and estuaries of California, and are now restricted to a fraction of their former range.[56] TCA concedes that the San Mateo Creek Lagoon is habitat for the tidewater goby, but insists that the species will not be affected by Foothill-South, either during construction or afterwards. This is inaccurate. The subwatersheds and tributaries to San Mateo Creek, including its estuary and lagoon, play a special role in the aquatic ecosystem on which both steelhead and tidewater goby depend for their survival and recovery. As described above, due to extensive degradation of subwatersheds by the Toll Road and inadequate mitigation measures, erosion and fine sediment delivery to the lagoon at the creek mouth has the potential to change its ecology over time.[57] This would be highly detrimental to the tidewater goby, which is threatened by both siltation and urban development leading to loss of coastal saltmarsh habitat.[58]

The Commission has not only the authority, but also the responsibility, to review both immediate coastal zone impacts and upstream activities that may affect coastal resources for consistency with the Coastal Act. 16 U.S.C. § 1456(c)(3)(A); *see also Millennium Pipeline Co.*, 424 F. Supp. 2d at 177-78 (because potential pipeline rupture at inland location could interrupt water flow of aqueduct to New York City and thereby impact coastal resources, finding of inconsistency was proper); *California ex rel. California Coastal Comm'n*, 150 F. Supp. 2d at 1052. Toll Road construction both within and directly upstream of the coastal zone will not only affect, but also significantly degrade, ESHA within the coastal zone. This entire portion of the Toll Road project is therefore inconsistent with the Coastal Act.

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[51] K.B. Suttle, et al., *How Fine Sediment in Riverbeds Impairs Growth and Survival of Juvenile Salmonids, Ecological Applications*, Vol. 14 No 4, August, 2004 at 969-974.
[52] A.P. Wheeler, et al., *Impacts of New Highways and Subsequent Landscape Urbanization on Stream Habitat and Biota*, 13 Reviews in Fisheries Science 141, 144-45 (2005).
[53] Philip Williams & Associates, Ltd., *Letter to Surfrider Foundation*, August 31, 2007 ("*PWA 2007 Analysis*") at 2-3.
[54] M. Lindley, Philip Williams & Associates, Ltd. (pers. comm. January 17, 2008).
[55] *PWA 2007 Analysis* at 3.
[56] Ventura Fish & Wildlife Office: Tidewater Goby, http://www.fws.gov/ventura/sppinfo/profiles/details_fish.cfm?speciesid=122 (last visited January 16, 2008).
[57] *PWA 2007 Analysis* at 3.
[58] Ventura Fish & Wildlife Office: Tidewater Goby, http://www.fws.gov/ventura/sppinfo/profiles/details_fish.cfm?speciesid=122 (last visited January 16, 2008).

b. The Project's Impacts on Habitat Values Are Not Mitigated by Regional Conservation Plans.

TCA relies heavily on the existence of the Natural Communities Conservation Plan/Habitat Conservation Plan ("NCCP/HCP") for the southern Orange County area and the Integrated Natural Resource Management Plan ("INRMP") for Camp Pendleton[59] to attempt to mitigate for the loss of habitat values caused by the Project. But the Toll Road is not part of, nor is it covered by, either of these conservation plans. Its impacts were not addressed or mitigated through the NCCP/HCP.[60] Indeed, the impacted portion of the coastal zone – and the entirety of San Onofre State Beach – are located in San Diego County and are entirely *outside* of the NCCP/HCP Planning Area.[61] Furthermore, the Integrated Natural Resources Management Plan ("INRMP") for Camp Pendleton simply recognizes the Toll Road as a potential *future* project and states that any adverse environmental impacts that result from the Project must be fully and properly mitigated; the INRMP itself does not provide any mitigation for the project's impacts.[62] TCA's numerous references to these plans are therefore irrelevant.

But even if this mitigation plan were relevant, the Toll Road cannot be found consistent with the Coastal Act. No mitigation compensates for the fact that the Toll Road would not just significantly disrupt, but would completely destroy, critical portions of ESHAs as defined in § 30107.5 of the Act. The razing of dozens of acres of this rare mosaic of riparian habitat, wetlands, marsh and estuarine vegetation, and coastal sage scrub – and the resulting damage to the suite of protected species found there – would flagrantly violate the policies and purposes of the Coastal Act. Section 30240(a) of the Act unqualifiedly prohibits such disruption of protected ESHAs.

Even under the untenable assumption that no "significant disruption" of an ESHA would occur, a highway project such as the Toll Road intended to address county transportation issues is a not "resource dependent use" under any reasonable interpretation of the term. Accordingly, the Act prohibits any part of the use from occupying an ESHA. TCA concedes that the Toll Road will occupy ESHA. The Toll Road is therefore *per se* inconsistent with the § 30240(a) of the Coastal Act.

B. <u>Parks, Recreation and Public Access</u>

Access to recreational opportunities*. *Coastal Act § 30210: *In carrying out the requirement of <u>Section 4 of Article X of the California Constitution</u>, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

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[59] *See Consistency Application* at 59-61.
[60] Southern Subregion Natural Community Conservation Plan ("SSNCCP"), EIR/EIS at 1-26 to 27, http://www.ocplanning.net/docs/ssnccp/EIR-EIS/nccp_eir_ch_01.pdf (last visited January 16, 2008).
[61] SSNCCP, Figure 3-M, http://www.ocplanning.net/docs/ssnccp/Mapbook/figure003_m.pdf (last visited January 16, 2008).
[62] *See* Marine Corps Base Camp Pendleton, *Integrated Natural Resources Management Plan* (March 2007) (hereafter "2007 INRMP") at 2-49, available at http://www.cpp.usmc.mil/base/environmental/inrmp.asp (last visited January 16, 2008).

Lower cost visitor and recreational facilities. ***Coastal Act § 30213:*** *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Protection of certain water-oriented activities. Coastal Act § 30220: *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

Oceanfront land; protection for recreational use and development. Coastal Act § 30221: *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

Protection of upland areas for recreational uses. Coastal Act § 30223: *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

Protection of Parklands. Coastal Act § 30240(b): *Development in areas adjacent to . . . parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those. . . recreation areas.*

The Coastal Act contains strong policies mandating maximum coastal access and protection of coastal park and recreational areas. Tellingly, there is not a single policy in the Act which recognizes new development within park or recreation lands. Section 30240(b) of the Act requires that any development in areas *adjacent* to park and recreation areas shall be compatible with and prevent impacts to those areas. The legislature apparently assumed that park lands within the coastal zone would remain permanently protected.

The Foothill-South would not only severely impact but would *run right through* one of California's most popular parklands, the state park at San Onofre State Beach. The massive six-lane highway would directly occupy approximately *four miles* and over *320 acres* of the park, and fragment and degrade the remaining lands, including those within the coastal zone.[63] The highway would literally run through the center of the Park's entire inland subunit (Subunit 1) splitting the park along its spine. The California Department of Parks and Recreation ("Parks Department") – in a study commissioned by TCA itself – concluded that it would likely be forced to abandon nearly all of Subunit 1, over 1,000 acres (approximately 60% of the park). This could ultimately result in the closure and abandonment of San Mateo Campground, the park's most popular campground, and the trails that lead from the campground to Trestles Beach.[64]

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[63] California Department of Parks and Recreation, *Map of Area Impacted by the Foothill-South*, Jan. 9, 2006.
[64] California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* (Aug. 1997) ("*Parks Dept. Mitigation Assessment*") at 6; California Department of Parks and Recreation, *Comment Letter to TCA*, January 10, 2006 ("*Parks Dept. Comment Letter*") at 5.

Never before in California has a local governmental entity like TCA sought to take state parkland to develop a major infrastructure project, much less a project of this scale. The loss of state parkland and major coastal access facilities inflicted by this Project, as well as its indirect impacts on coastal and water recreational resources, is unprecedented and in direct violation of the Coastal Act's public access and recreation provisions. The Project's impacts on San Mateo Campground and Trestles Beach are discussed in more detail below.

1. San Mateo Campground

a. San Mateo Campground Is an Irreplaceable Coastal Resource

San Mateo Campground – located just outside the coastal zone and connected by a trail to Trestles Beach – is one of the most important coastal recreational resources in the region.

The creation of San Mateo Campground was mandated by this Commission as a condition to amending the Coastal Development Permit for the San Onofre Nuclear Generating Station (SONGS) in 1982. SONGS had sought new restrictions on public access to the beach near the station. The Commission required the development of the campground with a trail to the beach, to mitigate for the loss of beach access.[65] As recited in the Permit, the condition was necessary to ensure conformance with the Coastal Act.[66] Due to the Commission's action, San Mateo Campground is by definition a coastal resource, and one that was expressly created by the Commission to further the purposes of the Act.

The campground was intended to expand public access to the park's beaches. As the Commission stated in its findings on the SONGS permit:

> Opening a new segment of the park [in San Mateo Canyon] will serve one important segment of the general population affected by the lost access at SONGS – those from upland and inland areas who gain access to the beach by camping nearby. There is a great demand for additional camping facilities in the area. Development of new facilities is restricted because of the 15-mile long expanse of Camp Pendleton to the south. During the warm months, campgrounds in the area must turn away tens of thousands of persons. ***The Commission expects the new facility at Parcel 1 to significantly increase and enhance public access to the beach segments of the State Beach***.[67]

The Commission's expectations have come to pass. Today, San Mateo Campground receives over 100,000 visitors a year.[68] The San Mateo Campground's popularity comes from its relatively isolated location in an undeveloped coastal canyon along San Mateo Creek.[69] In addition, the campground provides increasingly rare low-cost accommodations for the region's coastal visitors. San Mateo Campground accounts for more than 10% of coastal campsites

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[65] CDP # 183-73, Amendment # 6-81-330-A.
[66] *Id.*, Exh. 2 at 8 (Condition E.)
[67] *Id.* at 14 (emphasis added).
[68] *Parks Dept. Comment Letter* at 6.
[69] *Id.*

within a 50 miles radius.[70] As the Parks Department has stated about the campground, "the affordability of this coastal resource for middle and lower income visitors makes it even more important that it be kept intact and undiminished."[71]

The Campground not only provides public access to the coast, but it is an intrinsic and essential part of what makes Trestles Beach a unique experience for visitors. Trestles is one of the only remaining beaches in Southern California that is not directly accessible by automobile and must be hiked into. One of the beach's primary attractions is the highly scenic trail linking it to San Mateo Campground, which runs through "a relatively unspoiled wetlands area" down to the beach, allowing visitors to experience the natural transition of the native landscape.[72] The Campground itself is also part of the coastal experience. Visitors who camp or picnic in the inland portions also walk to the coast to swim, surf, relax on the beach, and explore the Park's successive habitats, including surf, reef, beach, coastal bluff, wetland, grassland, sycamore groves, scrub, hills, arroyos, and valleys, along with abundant wildlife, all of which together make San Onofre unique.

The campground is not only an essential coastal resource – it is irreplaceable. Aside from a long-planned facility at Crystal Cove State Beach that will replace an existing trailer park,[73] the Parks Department has been unable to add a single campground along California's coast in the 16 years since San Mateo Campground was constructed. And there are no sites left in the region that would be capable of providing comparable public access and recreational value. According to the Parks Department, "the existence and convenient availability of such an increasingly rare resource and experience to the large Southern California population serves an important societal function which once lost cannot be replicated in whole elsewhere in this region."[74]

b. The Toll Road Would Destroy the Campground

San Mateo Campground would be effectively shut down by the Toll Road. According to TCA, the Project footprint would avoid the campsites themselves. However, the Toll Road would come within 200 feet of the campsites. The Project would place the Campground – now located in a quiet, undeveloped coastal canyon – in the shadow of a major highway, with a view of massive soundwalls on engineered hillsides. Campers, hikers and picnickers would be plagued by construction noise in the short term, and traffic noise permanently.[75] In short, the Campground's "spirit of place" – a term used by the Parks Department – would be destroyed.[76]

Indeed, this is such a serious loss that the Department ultimately may have to abandon nearly all of Subunit 1, including all 161 sites in the campground and over 1,000 acres of surrounding parkland.[77]

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[70] Figure, *Southern California Campgrounds*, California State Parks Foundation and GreenInfo Network, 2007.
[71] *Parks Dept. Mitigation Assessment* at 2-3.
[72] *Parks Dept. Mitigation Assessment* at 2.
[73] *See* Crystal Cove State Park General Plan (March 1982) at 43-44.
[74] *Parks Dept. Comment Letter* at 5.
[75] *Parks Dept. Mitigation Assessment*, Appendix B.
[76] *Id*. at 2; *see also id.*, Appendix A at A-3 to A-4.
[77] *Parks Dept. Comment Letter* at 5; *Parks Dept. Mitigation Assessment* at 6.

Several years ago, the Department convened a "San Onofre Mitigation Assessment Team" to evaluate possible mitigation measures in the event that TCA approved a toll road alignment through San Onofre. After reviewing the team's recommendations, the Department reached some dramatic conclusions:

> [T]he fragmentation of Subunit #1 by the proposed highway corridor will severely restrict the use of the property for recreation purposes, as well as significantly and irrevocably altering its environmental setting, that of San Mateo Campground, and other recreational opportunities provided for in the unit's General Plan. The linear nature and split elevation of the arterial and any retaining walls, soundwalls, and their landscaping will reduce the site's attractiveness to the public, as well as being a wildlife barrier and a management obstacle. These unnatural and discordant visual elements will intrude upon previously open vistas, high volume noise will impose on normal recreation activities, day activities at the campground as well as its existing night quiet, and the amphitheater campfire area will be forever altered and rendered unusable.[78]

As a result of these impacts, the mitigation assessment team concluded that the proposed toll road alignment "will result in a take of the functional use of the majority of Subunit #1" of the park, and recommended that "[w]ith the exception of the support parking for the trail to Trestles, all of Subunit #1 be abandoned to the lessor."[79] In its comment letter to TCA on the FSEIR, the Department reiterated its concerns about the destruction of San Mateo Campground:

> It does not take an expert to understand that locating a multi-lane, limited access highway within a few hundred feet of a secluded campground will so destroy the recreational value of the campground and sense of place as to render it valueless. . . . [P]eople who use San Mateo Campground do so because of its relative quiet and seclusion. They do not go camping to be next to a multi-lane highway and have their views truncated by a 16' high soundwall.[80]

The letter also reported the grave concern of Department staff that "the result of these impacts will be the eventual loss of San Mateo Campground."[81]

The Toll Road thus very likely spells destruction of a major coastal resource – a resource that was mandated by this Commission in order to achieve compliance with the Coastal Act. The 100,000 annual State Beach visitors who use the Campground – including working families and other users who rely on this affordable facility – would be severely impacted. The expanded public access to the coast that the Commission required as compensation/mitigation for the significant loss of access caused by SONGS would be lost.

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[78] *Parks Dept. Mitigation Assessment* at 5.
[79] *Id.* at 5, 6.
[80] *Parks Dept. Comment Letter* at 4-5.
[81] *Id.* at 6.

In addition, the existing highly scenic trail connecting San Mateo Campground to Trestles Beach – which runs under the interstate but is an essential natural experience, traversing the native landscape – would be destroyed and replaced by an urban pedestrian overpass that follows the Toll Road and actually requires crossing *over* it.[82] This highway-dominated route would constitute a fundamental change in the unique visitor experience of Trestles.

TCA fails to acknowledge that the Project will have any impacts to the Campground or the public access and coastal recreational opportunities it provides. TCA appears to rely in part on the fact that the Campground "is not located within the coastal zone."[83] TCA's position misrepresents the law. The Coastal Zone Management Act expressly extends the Commission's jurisdiction over consistency review to activities outside the coastal zone that will have foreseeable direct or indirect impacts on resources or uses within the coastal zone. *See* 16 U.S.C. § 1456(c)(3)(A) (consistency certification required for projects outside coastal zone that affect resources within); *Millennium Pipeline Co.*, 424 F. Supp. 2d at 177-78; *California ex rel. California Coastal Commission*, 150 F.Supp.2d at 1052 (federal activities "within or outside the coastal zone" that affect coastal-zone resources shall be consistent with coastal laws pursuant to CZMA); San Mateo Campground provides a perfect case in point: the loss of the Campground will have a major, adverse effect on the ability of the public to access, use and enjoy Trestles Beach. Accordingly, the Commission has both the authority and the responsibility to review impacts to the Campground for consistency with the Coastal Act.

TCA also repeatedly cites the fact that the park is situated on federal land not owned by the State, but the ownership of the land is immaterial. The park provides the same benefits to the public whether leased or owned by the State. Moreover, since its inception, it has been understood that the park is permanent. President Nixon, Governor Reagan, and the California Legislature have all made clear that San Onofre is to forever remain a state park. When President Nixon presided over the creation of the state park at San Onofre, he declared that, as soon as it is possible for the federal government to declare the property surplus, the lease will be terminated and the property "will be *deeded* to the State of California for park purposes."[84] Governor Reagan agreed: "This expanse of acreage, San Onofre Bluffs [*sic*] State Beach, *now has its future guaranteed* as an official state park."[85] The intent to permanently preserve the land as a park is reflected in California law, which provides that "if the Camp Pendleton Marine Base in the County of San Diego ceases to be used as a federal facility, *it shall be converted to an open-space area or greenbelt* that shall be administered by the [Parks] [D]epartment." Pub. Res. Code § 5096.400 (emphasis added). State law further provides that "[a]ll real property acquired for park and recreation purposes by the state which was formerly part of Camp Pendleton *shall be used solely for park and recreation purposes and no part thereof shall be declared surplus or disposed of*." Gov. Code §11011.7 (emphasis added).

TCA also improperly relies on a right-of-way reservation in the State's lease with the Navy. Contrary to TCA's assertions, that provision in no way authorizes a six-lane highway through the park. The lease allows the Navy to grant *only* those easements or rights-of-way that

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[82] FSEIR at 4.25-27; TCA, *Trail Location*, Exh. 3, March 2007.
[83] *Consistency Application* at 15.
[84] President Richard Nixon, *Press Statement*, March 31, 1971.
[85] California Governor Ronald Reagan, *Press Statement*, April 3, 1971 (emphasis added).

will not "unreasonably interfere with the use of [State Parks] improvements."[86] The six-lane toll road, which would interfere with (and indeed likely shut down) the entire San Mateo Campground, would plainly violate this lease restriction. But in any event, the lease provision is a red herring. Even if the road were allowed under the lease (which it is not), that fact would in no way lessen the Project's impacts on coastal access or its inconsistency with Coastal Act policies.

c. TCA Has Not Proposed Adequate Mitigation for the Campground, Nor Is Such Mitigation Available.

TCA's failure to acknowledge any public access or recreational impacts from the Project is mirrored by its failure to provide any meaningful mitigation for those impacts. For years, TCA's only approach to the issue of mitigation was to defer it. The FSEIR never identified any specific measures to replace lost park lands or provide substitute recreational resources. Rather, TCA merely promised to "consult" and "negotiate" with owners or operators of affected recreational resources at some unspecified point in the future.[87] As the Parks Department itself put it in a letter to TCA regarding the FSEIR, these "promises to talk" mitigate nothing and commit TCA to nothing.[88] Indeed, as discussed above, these resources are unique in the region and are literally irreplaceable.[89] TCA's consistency application likewise offers no mitigation and takes the approach that impacts to San Onofre are not an issue – an attitude the Parks Department correctly identified as "simply not grounded in reality."[90]

Then, less than two weeks before the hearing, TCA came up with a new approach to parks mitigation: offer money. TCA has offered to pay the Parks Department $70 million that, according to TCA, could be used to renew the SOSB lease in the year 2021, and another $20 million to restore cottages at Crystal Cove or construct campsites in that park or at San Onofre. As detailed in Section IV of this letter, however, none of this money would mitigate the impacts of the Toll Road. There is no basis for concluding that *any* money (much less $70 million) will be required to renew the San Onofre lease 14 years from now. And the other expenditures identified by TCA are for projects that are *already planned and will occur with or without the Toll Road*.

Moreover, none of the projects identified by TCA could mitigate the loss of San Mateo Campground, which offers low-cost, quiet, relatively undeveloped coastal camping accommodations that are impossible to duplicate – and therefore irreplaceable – in the region. As the Parks Department has stated:

> The existence and convenient availability of such an increasingly rare resource and experience to the large Southern California population serves an important societal function which once lost ***cannot be replicated in whole elsewhere in the region***.

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[86] *See* Agreement of Lease Between State of California Department of Parks and Recreation and United States of America (No. NF(R) 13233) (Aug. 31, 1971), Part II at 2.
[87] FSEIR at 4.25-28 to 4.25-29.
[88] *Parks Dept. Comment Letter* at 7.
[89] *See id.* at 8.
[90] *Id.* at 4.

> California State Parks asserts that the fragmentation of the park by the proposed preferred alternative leaves no real opportunities for on-site mitigation for the values, resources and recreational opportunities for which this park was established. Our knowledge of the region leads us to conclude that ***losses to the existing unit cannot be fully mitigated***.[91]

There is simply no conceivable rationale under which a major coastal recreational facility created at the insistence of the Coastal Commission to satisfy the requirements of the Coastal Act can now be eliminated consistent with the Act. The severe loss of public access and coastal recreational opportunities that would be caused by the loss of San Mateo Campground renders the Project inconsistent with the Act's policies requiring maximum public access, protection of lower cost coastal recreational opportunities, and avoidance of impacts to parks.

2. Trestles Beach.

The Foothill-South also directly impacts Trestles Beach – a world-class surfing destination.[92] Trestles Beach is known among surfers as the "Yosemite of surfing" and has attracted the likes of some of the world's most famous surfers, including Kelly Slater, who won a surfing competition there in 1990. It is the *only* beach in the continental United States where the Association of Surfing Professionals' World Championship Tour holds a competition,[93] and is host to numerous other professional and amateur surfing competitions throughout the year, including the National Scholastic Surfing Association's national championships. This is not your average surf spot – so many people visit Trestles that there is a "crowd in the water" for just about any given swell.[94] Trestles Beach was first discovered by pioneering local surfers in 1933 and is now historically recognized as having played a significant role in the evolution of surfing as a sport. In fact, Trestles is potentially eligible for nomination as a State Historic District, as a California State Point of Historic Interest (on the California Register of Historic Resources), and to the National Register of Historic Places.[95]

In addition to the public access impacts to Trestles that would be caused by the loss of San Mateo Campground, the Toll Road threatens to impact the internationally renowned surfing conditions found at Trestles. These conditions are created and maintained by sediment influx from San Mateo Creek and its tributaries, including Cristianitos Creek. Cobblestone rocks are carried down the creek and deposited in a delta, which leads to the world class waves that break left and right year-round.[96]

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[91] Parks Dept. *Comment Letter* at 8.
[92] The Trestles beach includes several surfing hot spots in the coastal zone that would be affected by the project, including Cotton's Point, Upper Trestles, and Lower Trestles. *See* M. Hagemann, SWAPE, *Comments on the EIR/SEIS for the SOCTIIP* (July 28, 2004) (hereafter "*SWAPE*") at 17, reproduced in FSEIR, vol. IX, comments O21-351 to O21-423.
[93] ASP World Tour, http://64.78.18.131/asp2005/2006news.asp?rView=w&rEventName=&rEvent=trestles06&rCode=5943 (last visited January 16, 2008).
[94] Phillip Williams & Associates, Ltd., "Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area," January 11, 2006 ("*PWA 2006 Report*") at 3.
[95] California State Parks and Recreation Department, *Letter from Historian A. Bevil to M. Rauscher*, dated Aug. 31, 2007.
[96] *SWAPE* at 18.

TCA refuses to acknowledge the potentially drastic effect the Toll Road could have on Trestles, claiming that no significant permanent adverse effects would damage coastal surfing. TCA asserts that the supply of sediment from inland would not be significantly changed and that, therefore, the cobblestone delta which supports wave formations would remain stable.[97] However, TCA's analysis is flawed.

TCA erroneously focuses on the amount of new impermeable surface relative to the entirety of a large watershed, and fails to account for the devastating effects of the Toll Road on 20 subwatersheds proximate to the mouth of San Mateo Creek, which have a disproportionate effect due to proximity.[98] These steep canyons are sources of fine sediments. An engineering study, which included field reconnaissance, shows that paving and cut and fill from the Toll Road – over 40 million cubic yards[99] – will "result in massive hydrological changes" to these fragile subwatersheds.[100]

The erosion impact to a stream channel is exponentially proportional to the percentage of upstream watershed that is impermeable or disturbed.[101] The upstream portion of the eight subwatersheds closest to the mouth of the creek would be disturbed 40% on average,[102] a level associated with severe erosion and channel degradation in the vicinity of the Project.[103] Within many of the destabilized canyons, the sediment transport and hydrology of streamcourses will be "highly altered."[104] The combination of disturbance of watersheds and concentration of flow in culverts is likely to cause erosion of fine sediments and destabilization of stream channels. The proposed BMPs (energy dissipation at culvert outlets and revegetation along cut and fill slopes) will not fully address impacts associated with flow concentration, increased runoff, and the potential for significant soil erosion.[105]

This is not the first time TCA has relied on BMPs to support a claim that its projects will not cause erosion. It made precisely the same claim for the San Joaquin Hills Transportation Corridor. Yet a fill constructed to similar standards by TCA failed in upper Deer Creek canyon, causing severe erosion that was dumped into Crystal Cove State Park.[106] TCA claims to have learned "lessons" from that project. But the state's pristine watersheds and coastal parks are not the place to conduct major erosion control experiments. Optimistic claims that BMPs will prevent erosion for major roadway projects have been repeatedly proven wrong.[107] It is simply

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[97] *Consistency Application* at 24.
[98] *PWA 2006 Report at 12.*
[99] TCA's insistence that the Commission should consider only the 1.4 million cubic yards of cut and fill that would occur within the coastal zone is illustrative of TCA's repeated attempts to downplay the impacts of the Project. The Commission has clear authority to consider any of the Project's sedimentation impacts within the San Mateo Creek watershed that will flow into and impact the coastal zone.
[100] *PWA 2006 Report at 13.*
[101] Philip Williams & Associates, Ltd., *Letter to California Coastal Commission*, January 17, 2008 ("*PWA 2008 Letter*") at 1, 2.
[102] *PWA 2007 Analysis* at 1.
[103] *PWA 2006 Report* at 2.
[104] *Id.* at 21.
[105] M. Lindley, Philip Williams & Associates, Ltd. (pers. comm. January 17, 2008).
[106] *Parks Dept. Comment Letter* at 14.
[107] *See id.* at 13-14 (describing Caltrans roadway project that caused "tons of sediment" to overwhelm drainages in a northern California State Park).

disingenuous to claim that a cut and fill project of this magnitude in a highly erosion-prone area will not have an impact on creek sedimentation.

Increased delivery of silty sediments has the potential to affect cobble deposition, and thereby alter wave formation. This can occur in two ways. First, a sediment mix richer in fine materials will tend to deposit gravel and cobble in the creek bed, and carry the finer sediments out to the mouth, reducing delivery of cobble to Trestles.[108] Second, once exposed to wave action, the changes in the relative amounts of fine and coarse sediments will alter the "porosity" of the mix, resulting in cobble moving onshore or offshore.[109] These changes in cobble transport and deposition may change the morphology of the delta and alter wave formation.[110] Although we have been unable to review all of the materials submitted by TCA in response to the Staff Report, TCA's prior analyses looked only at hydrologic effects related to the flows discharged from the proposed best management practices for the impervious highway corridor rather than effects related to *total* sediment delivery and changed sediment *composition*. Based on these analyses, there is simply insufficient basis for TCA's conclusion that wave form will not be altered by the Toll Road.[111]

The waves at Trestles are one of California's unique and historic natural treasures. If the sediment regime of San Mateo Creek is altered by the Toll Road, the wave formations that make Trestles the "Yosemite of surfing" could be irreparably lost. The irreplaceable value of Trestles as one of the world's greatest surfing resources requires the utmost caution in assessing any potential threat to its continued viability. TCA's assurances that Trestles will not be harmed are not adequately supported. Accordingly, the Project is inconsistent with the Coastal Act's requirement that parks, areas suited for water-oriented recreational activities, and lower cost recreational facilities be protected.

C. <u>Wetlands</u>

Filling and Dredging of Wetlands. Coastal Act § 30233. Section 30233(a) of the Coastal Act prohibits diking, filling, or dredging of coastal wetlands unless all of the following requirements are met: (1) the project falls into one of seven listed categories; (2) "there is no feasible less environmentally damaging alternative"; and (3) "feasible mitigation measures have been provided to minimize adverse environmental effects." The Foothill-South fails **all three** parts of this test.

TCA's description of the acreage of impacted wetlands has fluctuated since the submittal of its consistency application,[112] but the most recent delineation indicates that approximately 7.9 acres of wetlands will be subject to temporary or permanent impacts.[113] Focusing on the acreage of wetlands permanently occupied by the project (0.16 acres), TCA has sought to portray the

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[108] *PWA 2006 Report* at 11-12.
[109] *PWA 2007 Analysis* at 2.
[110] *Id*. at 3.
[111] *PWA 2006 Report* at *12*.
[112] Compare *Consistency Application* at 43 with Glenn Lukos Associates, *Letter to Transportation Corridor Agencies*, Aug. 31, 2007 at 1.
[113] *See* Glenn Lukos Associates, *Jurisdictional Delineation for the Foothill Transportation Corridor – South Orange County, California* (Dec. 2007).

Project's wetland impacts as minor and mitigable through the creation of one acre of new wetland directly adjacent to a proposed detention basin and the Toll Road structure.

In fact, the impacted wetlands are part of a "highly diverse, intact, and regionally significant complex of habitats supporting special status species" – one of the increasingly rare functional ecosystems remaining in Southern California – and as such have a high ecological value largely ignored by TCA.[114] TCA's proposed mitigation "cannot mitigate either the direct or indirect impacts" of the Toll Road on this important coastal wetland habitat.[115]

But as discussed below, even if the Toll Road did not fail the mitigation test, it would be inconsistent with the Coastal Act, both because it is not one of the allowable uses enumerated in the Act and because it does not meet the Act's least damaging feasible alternative test. Each of these three tests precludes a consistency finding.

1. The Foothill-South is not an allowable use for fill of wetland resources under Section 30233(a)(1)-(7).

TCA claims that the Toll Road serves an "incidental public service purpose" under section 30233(a)(4) and is therefore not absolutely prohibited in coastal-zone wetlands.[116] This claim is baseless.

The plain language of this provision lists "burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines" as examples of the types of projects that are properly considered "incidental public service purposes." Clearly, a new six-lane highway is of a much different character than burying cables or maintaining outfall lines. Such a project would create much more extensive environmental harm than the type of projects contemplated by the statutory language and can in no way be considered "incidental."[117] *See Barrett v. Superior Court*, 222 Cal. App. 3d 1176, 1190-91 (1990) (where specific examples follow a general term in a statute, application of the general term is limited to things of the same type as the specific examples).

Both the Commission and the courts have made clear that new roadways cannot be considered an "incidental public service purpose" within the meaning of section 30233(a)(4). As the court stated in *Bolsa Chica*:

> [W]e accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. *Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*

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[114] M.D. White, *Letter to M. Delaplaine*, Jan. 16, 2008 at 4.
[115] *Id.* at 2.
[116] *Consistency Application* at 42, 47.
[117] *See Bonnie's Random House Webster College Dictionary* (1991 Ed.) at 880 (the term incidental is defined as "happening or likely to happen in an unplanned or subordinate conjunction with something else.") The Toll Road exists as an independent project and clearly is not happening in an "unplanned or subordinate conjunction" with anything else.

71 Cal. App. 4th at 517 (emphasis added). Thus, only the expansion of an *existing* road to accommodate *existing* capacity may be an incidental public service purpose.[118]

Foothill South is a new six-lane highway designed to provide *increased* roadway capacity to handle traffic from future development. It does not expand an existing road, nor is it limited to accommodating existing capacity. As TCA stated in the FSEIR, the project's purpose is to "help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement and future traffic demands on I-5 and the arterial network in the study area."[119] This is exactly the kind of road expansion that cannot qualify as an "incidental public service purpose." *Bolsa Chica*, 71 Cal. App. 4th at 517.

In contrast, as the Staff Report correctly points out, the prior Commission matters cited by TCA[120] do not support its argument that the Toll Road is an incidental use. In those matters, the Commission found either that the transportation facilities at issue would not increase existing capacity, or that the facilities were *not* an incidental use.[121] This is consistent with the *Bolsa Chica* and longstanding Commission precedent, which has never considered a new road to be an incidental use.[122] The Foothill-South is a new road designed specifically to increase roadway capacity to accommodate future development. There is no precedent or persuasive rationale to allow the Foothill-South to qualify as an incidental public use. Accordingly, fill of wetlands for the Project is not permitted.

2. There Are Feasible, Less Damaging Alternatives to the Toll Road.

Even if it qualified as an incidental public service purpose, the Project is not consistent with Section 30233 because there are *feasible less environmentally damaging alternatives*. The problem of traffic congestion in Orange County can be addressed just as well by alternative solutions that have not been meaningfully examined by TCA. The most obvious of these alternatives center on improvements to the County's *existing* I-5 corridor and arterial network. TCA's rejection of this alternative as infeasible is not based on any substantial evidence. To the contrary, as discussed below in Section II.A, the evidence shows that such alternatives – which would not substantially impact the coastal zone and are environmentally superior by TCA's own admission – are feasible.

3. Even if Mitigation Criteria Were Relevant, TCA Failed to Identify Effective Mitigation Measures.

As discussed above, TCA is barred from filling wetlands for the Project regardless of any mitigation offered. Where – as here – a project impacting coastal wetlands is not an

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[118] *See* California Coastal Commission, *Procedural Guidance for the Review of Wetland Projects in California's Coastal Zone*, ch. 1, § III.B.1.iii, available at http://www.coastal.ca.gov/wetrev/wetch1.html (last visited January 16, 2008).
[119] FSEIR at 1-16. In this light, the statement in TCA's consistency application that Foothill-South "will maintain current levels of capacity to alleviate existing congestion" is both nonsensical and fundamentally misleading.
[120] *See Consistency Application* at 47.
[121] *Staff Report* at 86-89.
[122] *Id.* at 88.

allowable use under section 30233(a), mitigation measures cannot make the use consistent with the Coastal Act. *See Dunn v. County of Santa Barbara*, 135 Cal. App. 4th 1281, 1297 (2006)

Even if mitigation measures could resolve this conflict as a legal matter, which they cannot, TCA's proposals would be biologically and functionally inadequate. TCA proposes to "create" 15.9 acres of wetlands and riparian habitat in the San Juan Creek watershed.[123] The wetlands taken by the Toll Road, however, would be lost from a rare and irreplaceable coastal complex of wetlands, estuary, marsh, and adjacent uplands, all part and parcel of an undammed and relatively pristine watershed. Riverine and estuarine resources at the broad ocean mouth of a creek cannot be replaced by "recontouring uplands"[124] in a canyon 15 to 20 miles inland – well outside the coastal zone and in a different watershed. The species compositions and biological functions and values are all different, and even if successful, would result in a *net loss* of coastal wetland resources.[125]

Following submission of its original consistency certification, TCA identified an acre of fallow agricultural land adjacent to I-5 that it proposes to restore to "southern willow woodland" in mitigation for impacts to wetlands within the coastal zone. This proposed mitigation area is within the Project right-of-way in the same location as one of the extended detention basins ("EDBs") that TCA has proposed to treat surface runoff from I-5.[126] This location cannot replace the lost functions and values of the natural channels of San Mateo Creek and its wetland-upland complex.[127] The hydrology of the proposed mitigation area, located around a storm water detention basin, cannot possibly mimic the hydrology of the natural floodplain.[128] Also, because the entirety of the mitigation area is so close to I-5 and the merging Toll Road,[129] it would *all* be subject to adverse edge effects. With a maximum width of 200 feet, it is well within the range of such effects.[130]

In its most recent submittal, TCA provided a functional assessment of the impacted wetlands and "restored" mitigation site that suffers from numerous deficiencies. The metrics used in the assessment to measure functional capacity are statistically biased to disfavor certain critical functions of the impacted wetlands (such as landscape context and connectivity) without any substantiation.[131] Nor does the assessment even consider any indirect impacts, such as noise and vibrations, lights, altered runoff, generation of dust and contaminants, or air quality impacts.[132] Michael White, an aquatic biologist with 20 years of experience, has conservatively estimated that indirect impacts would permanently degrade roughly 5 to 7 additional acres of wetland and riparian habitat within the Coastal Zone (excluding wetlands inside of the existing Interstate-5 indirect impact zone).[133] In addition, another 2 to 40 acres of wetland and riparian

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[123] *Consistency Application* at 54.
[124] *Id* at 54.
[125] W.D. Spencer, PhD, *Letter to California Coastal Commission*, August 17, 2007 at 3.
[126] *Compare* Glenn Lukos Associates, SOCTIIP Mitigation Area D, Ex. 8, *with* DSEIR Appendix A.1, Route Plan for A7C-FEC-M Initial at 6 (Sheet 5).
[127] M.D. White, *Letter to Endangered Habitats League*, Sept. 13, 2007 at 3.
[128] *Id*. at 3.
[129] Trail Location, Exhibit 3, March 2007, Transportation Corridor Agencies.
[130] M.D. White, Letter to Endangered Habitats League, Sept. 13, 2007 at 3.
[131] M.D. White, *Letter to M. Delaplaine*, Jan. 14, 2008 at 3.
[132] *Id.* at 2-3.
[133] *Id.* at 3.

habitat currently lying within the existing indirect impact zone of I-5 will be even further degraded by the Toll Road.[134] Finally, TCA's assessment gives temporary impacts from construction a zero score, without providing any evidence that the impacted lands are capable of being restored to their prior condition.[135]

These deficiencies grossly distort the relative benefits of the proposed mitigation – despite the lack of a detailed mitigation plan. "It is hard to envision how the proposed mitigation site could have about the same Functional Capacity Score as the existing habitats (e.g., Table 1 vs. Table 5), particularly without the details of the wetland creation plan."[136]

The technical efficacy of creating new wetlands is itself questionable, particularly for the high resource values affected by this project.[137] The US Department of the Interior has stated that a big problem with mitigation projects is that often "the quality of the resulting mitigation wetland is not equal to the wetland that was destroyed."[138] The DOI also states that "wetland scientists are becoming aware that the many unknowns make it virtually impossible to provide definitive guidelines for successful wetland assessment and design."[139] In addition, a recent review of mitigation projects in California permitted from 1991-2002 (Ambrose et al. 2006) found that mitigation wetlands are not similar to those impacted by the permitted project.[140] TCA has not explained how the proposed wetland creation would overcome these problems.

Aquatic biologist Michael White, drawing on his specific expertise in assessing watershed integrity within the area of the project, has concluded that:

> The proposed FTC-S project would produce a much greater level of impact to these resources than is acknowledged by the project proponents, and these impacts are not adequately mitigated by their proposed mitigation measures. There would clearly be a net loss of wetland functions and values and "significant disruption of habitat values" as a result of the FTC-S project, which is at odds with National and State policies on wetlands protection.[141]

In sum, because the Toll Road does not serve an "incidental" public service purpose, and, independently, because there are feasible, less damaging alternatives, section 30233(a) flatly prohibits any filling of coastal wetlands for the Toll Road, regardless of any mitigation provided. Moreover, none of mitigation offered by TCA would replace the coastal wetland values that would be destroyed by the Toll Road. For each of these reasons, the Project's proposed fill of wetlands is inconsistent with the Coastal Act.

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[134] *Id.*
[135] *Id.* at 4.
[136] *Id.* at 4.
[137] *Id.*.
[138] Randall J. Hunt, *Do Created Wetlands Replace the Wetlands that are Destroyed*? US Department of the Interior-US Geological Survey, available at http://wi.water.usgs.gov/pubs/FS-246-96/FS_246-96.pdf (last visited January 16, 2008).
[139] *Id.*
[140] M.D. White, *Letter to Endangered Habitats League*, Sept. 13, 2007 at 3.
[141] *Id.* at 3-4.

D. Water Quality

Biological productivity; water quality. ***Coastal Act § 30231***: *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Marine resources. Coastal Act § 30230: *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance.*

Water quality would be significantly impacted by the proposed six-lane toll road. Currently the San Mateo watershed is one of the healthiest watersheds remaining in Southern California, with San Mateo Creek being the last undammed and undiverted major drainage basin south of Ventura.[142] The Toll Road would cut, fill and pave over miles of "the core of the relatively less-disturbed and naturally functioning portions of the San Mateo watershed."[143] This includes 12 subwatersheds that drain into the tributary Cristianitos Creek (five of which are within the undisturbed Donna O'Neil Land Conservancy), and eight that drain to the lower San Mateo Creek mainstem, immediately upstream of Trestles.[144] Water from these subwatersheds ultimately reaches that portion of San Mateo Creek within the coastal zone, including the lagoon, estuary, and Trestles.[145] Thus, Toll Road-related disturbances both within the coastal zone, and in the subwatersheds upstream of the coastal zone, will impact coastal resources. *All* of the activities causing these disturbances therefore must be evaluated for consistency with the Coastal Act's water quality policies. 16 U.S.C. § 1456(c)(3)(A); *see also Millennium Pipeline*, 424 F. Supp. 2d at 177-78.

The construction of the Toll Road through the steep, natural terrain of the San Mateo watershed will result in massive changes to the hydrology of the subwatershed drainages, causing stream destabilization and a significant increase in erosion and sediment production.[146] As discussed earlier, the increase in fine sediment delivery would adversely impact fish habitat in San Mateo Creek and lagoon, particularly for the federally endangered southern steelhead and tidewater goby.

TCA seeks to minimize the severity of these impacts by comparing the area of disturbance caused by the Project against the entire 136 square mile San Mateo Creek watershed, and concluding that the change in peak runoff *for the watershed as a whole* would be less than

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[142] *Spencer Conservation Priorities* at 36.
[143] *PWA 2006 Report* at 13.
[144] *Id*. at 2, 15-17 (Figs. 5-7), 21.
[145] *Id.* at 2, 4 (Fig. 1).
[146] *Id.* at 13.

3%.[147] But this approach masks the true impacts of the Project, which will have enormous impacts on the 20 subwatersheds within and just upstream of the coastal zone. The erosion impact to a stream channel is exponentially proportional to the percentage of upstream watershed that is impermeable or disturbed.[148] The Project's disturbance (i.e., cut and fill) limits would occupy over 40% on average (and up to 100% in some cases) of the upstream land area of the eight subwatersheds closest to the creek mouth.[149] Impermeable surfaces would cover up to 29% of the upstream area of individual subwatersheds.[150] These are very large percentages.[151] Impacts on this level are associated with destabilization of canyons, highly altered hydrology, and severe erosion.[152] Erosion and siltation impacts therefore could affect the ecology of the San Mateo Creek mouth and lagoon.[153]

TCA's proposed mitigation consists of revegetating the disturbed hillsides and placing energy dissipaters at culverts.[154] The combination of disturbance of watersheds and concentration of flow in culverts is likely to cause erosion of fine sediments and destabilization of stream channels. The proposed BMPs (energy dissipation at culvert outlets and revegetation along cut and fill slopes) will not fully address impacts associated with flow concentration, increased runoff, and the potential for significant soil erosion.[155] And there is a history of failed BMPs for highway projects (including TCA's) that have harmed State parks.[156] It is highly unlikely that the impacts of silt delivery to San Mateo Creek and lagoon can be mitigated with the proposed BMPs.[157]

TCA has also proposed constructing treatment facilities for an existing stretch of I-5, in an effort to portray the Project as having a net "benefit" to water quality. The I-5, however, crosses only a *single* subwatershed within the San Mateo Creek watershed, over a distance of less than half a mile. In contrast, the Toll Road would run approximately seven miles through *20* largely undisturbed subwatersheds of San Mateo Creek.[158] It is this massive *new* disturbance in one of the last high-integrity watersheds anywhere in Southern California that poses the real threat to water quality, not the existing I-5. Indeed, there is no evidence of any significant water quality problem in the Creek today.[159] The "benefit" provided by TCA's proposed mitigation is illusory. And as discussed in Section III below, providing new treatment facilities for the I-5 in no way depends on the construction of the Toll Road. Such facilities can be constructed as part of any alternative to the Toll Road (including the AIP-R alternative described in Section II

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[147] *PWA 2006 Report* at 2.
[148] *PWA 2008 Letter* at 1, 2.
[149] *See id.* at 3 & Revised Table 1; *see also PWA 2007 Analysis* at 3; *PWA 2006 Report* at 2, 16-17 (figs. 6-7), 18 (Table 1).
[150] *PWA 2008 Letter.*
[151] *PWA 2006 Report* at 12.
[152] *PWA 2007 Analysis* at 3; *PWA 2006 Report at 1, 21.*
[153] *Id.*
[154] *Consistency Application* at 35-37; TCA Response, Jan. 9, 2008 at 85
[155] M. Lindley, Philip Williams & Associates, Ltd. (pers. comm. January 17, 2008).
[156] *See* Section II.B.2, supra.
[157] *PWA 2007 Analysis* at 1-3.
[158] *PWA 2006 Report* at 15, Figure 5, *Subbasins Disturbed within the San Mateo Creek Watershed.*
[159] No water bodies at San Onofre have been identified by the Regional Board as impaired. *See* San Diego Regional Water Quality Control Board, *2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments,* http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r9_final303dlist.pdf (last visited January 17, 2008).

below), or indeed can be mandated by the Regional Board as a condition of Caltrans' stormwater permit.

The Toll Road, by devastating some of the most important watershed land left in the region, will increase fine sediments in the creek system and the lagoon, significantly reducing water quality and threatening two endangered fish species. The Project is inconsistent with the Coastal Act's requirement that water quality, biological productivity, and marine resources be maintained, and that special protection be given to areas and species of special biological significance. Coastal Act §§ 30231, 30230.

E. Cultural Resources

Native American Resources*. *Coastal Act § 30244: *When development adversely impacts archaeological or paleontological resources identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The ancient Acjachemen/Juaneño Village of Panhé, located on the banks of San Mateo Creek in San Onofre State Beach, is the ancestral home of the Acjachemen/Juaneño people, whose history in the area dates back 10,000 years. It plays a central role in the people's heritage and is actively used as a ceremonial and burial site.[160] Three of the Tribal Councils of the Juaneño Band of Mission Indians, Acjachemen Nation have adopted resolutions opposing the Toll Road based on the severe and irreparable damage that the Project will cause to the Village of Panhé.[161]

According to State Archaeologists, Panhé was the largest Indian village in this region in prehistoric and early historic times. Today, evidence of the village includes midden deposits, aboriginal artifacts, human burials, relics of houses and fire hearths, other cultural remains, as well as the memory of living Acjachemen people.[162] This site also is listed on the Sacred Lands file at the Native American Heritage Commission[163] and likely qualifies as a Traditional Cultural Property under the federal National Historic Preservation Act. 16 U.S.C. §§ 470, *et seq*. It is currently one of seven sites included within the San Mateo Archaeological National Register District and is eligible for listing on the National Register of Historic Places.[164]

Portions of the Village and its cultural resources are, according to State Archeologists,

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[160] *See* Juaneño Band of Mission Indians, Acjachemem Nation, Resolution 116, *A Resolution of the Tribal Council Supporting the Protection of Pane and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemen/Juaneño Village of Panhe* (July 10, 2007).
[161] *Id.*; *see also* Juaneño Band of Mission Indians, Acjachemen Nation, *Resolution Supporting the Protection of Panhe and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemen/Juaneño Village of Panhe* (May 19, 2007); Juaneño Band of Mission Indians, Acjachemem Nation, *Resolution Supporting the Protection of Panhe and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemem/Juaneño Village of Panhe* (July 21, 2007) (collectively "*Tribal Council Resolutions*").
[162] Associate State Archeologist Michael Sampson, *Letter to Endangered Habitats League*, Sept. 7, 2007.
[163] *Id*.
[164] *See* FSEIR at 4.16-16; FSEIR, vol. IX, Comment Letter O-26 (from Christopher A. Lobo, Secretary/Treasurer and CEO, Juaneño Band of Mission Indians, Acjachemen Nation, Aug. 6, 2004).

within the coastal zone and would be impacted by the Toll Road.[165] The Foothill-South would run adjacent to and through the Village of Panhé and its construction would pass within feet of the village's cemetery and interfere with traditional ceremonial uses.[166] In addition, if the road is built, increased scavenging and damage by relic collectors are anticipated. On February 15, 2006, the Native American Heritage Commission held a public hearing on the Toll Road, and determined – based on testimony from Acjachemen community leaders and tribal members – that the Project would cause severe and irreparable damage to important cultural resources within San Onofre State Beach.[167] Following approval of the Toll Road, the State of California filed a lawsuit against TCA on behalf of the Native American Heritage Commission, challenging the legality of these impacts.

According to TCA's own EIR, there will be "substantial adverse impacts related to archaeological and historic resources that cannot be fully mitigated."[168] Nevertheless, TCA fails to recognize the overwhelming spiritual importance of this area, which is a profoundly sacred site currently used for ceremony, song, and education by the living descendants of the people who once lived there.[169] The Toll Road's impacts on these values will be tremendous, permanent, and impossible to mitigate.[170] In particular, "[t]he known presence of burials at this site elevates its importance beyond any possibility for impact mitigation."[171]

The mitigation measures outlined in the consistency application, such as monitoring, cannot begin to compensate for such severe impacts. There is no "reasonable mitigation" that can address impacts to these ongoing cultural values. As a result, the project is inconsistent with section 30244 of the Coastal Act.

F. Scenic and Visual Impacts

Coastal Act § 30251: *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Visitors to San Mateo Creek, including hikers, picnickers, and campers, presently enjoy a quiet, relatively unobstructed wilderness experience. But if the Foothill-South is built, they will find themselves below a massive concrete soundwall that would irrevocably destroy the sense of

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[165] Associate State Archeologist Michael Sampson, *Letter to Endangered Habitats League*, Sept. 7, 2007.
[166] *See* Native American Heritage Commission, *Complaint for Injunctive Relief*, No. 06-GIN051370 (S.D. Super. Ct. filed March 22, 2006).
[167] *Id.*
[168] SOCTIIP Final EIS/SEIR, Executive Summary at 110.
[169] *See Tribal Council Resolutions*; *see also* FSEIR, vol. IX, Comment Letter O-26 (from Christopher A. Lobo, Secretary/Treasurer and CEO, Juaneño Band of Mission Indians, Acjachemen Nation, Aug. 6, 2004).
[170] *Id.*
[171] *Id.* at 4.

place and only partially block the traffic sounds that visitors are trying to escape. The Parks Department has concluded that "these unnatural and discordant visual elements will intrude into previous open vistas and impose high volume noise on normal recreation activities, as well as on night quiet."[172] The Parks Department also provided striking visual depictions of the changes that would occur if the Toll Road were constructed through the park.[173] In short, the Project would take one of the last remnants of large coastal open space left in Southern California and replace it with the incessant noise and visual blight of a six-lane highway and its infrastructure.

TCA identifies seven viewsheds in the park, but concludes that only one viewshed will experience adverse visual impacts of substantial magnitude. For six of the viewsheds, TCA claims that "the impact is not considered substantial because the difference in quality of existing and proposed conditions is minimal."[174] For the viewshed that TCA concedes would be substantially adversely affected, mitigation procedures would involve retaining walls and landscape requirements.

People visit San Onofre for the relatively unobstructed views of nature. The imposition of a massive six-lane toll road would cause a loss of scenic beauty that cannot be mitigated with a soundwall, which is itself an eye-blight. Instead of looking at trees and open space, the public will see massive slabs of concrete. The Parks Department has identified numerous visual impacts affecting the park, including damaged views from the beach caused by the flyway at Basilone Road, and ultimately it concluded that the Foothill-South would likely force them to close the entire inland portion of the park due to the noise and visual blight.[175] Thus, the Foothill-South's impact on park views would be dramatic and inconsistent with the scenic protections of the Coastal Act.

A massive interchange and new highway in the midst of a state park and within an undeveloped coastal refuge is the paradigm case of development that is fundamentally "incompatible with the character of surrounding areas" within the meaning of § 30251.

II. <u>THERE ARE SEVERAL LIKELY FEASIBLE AND EFFECTIVE ALTERNATIVES TO THE TOLL ROAD THAT WOULD DRASTICALLY REDUCE OR ELIMINATE IMPACTS TO COASTAL RESOURCES.</u>

TCA in its application insists that the traffic congestion relief the toll road would provide can only be carried out by building a massive highway down the spine of a state park, connecting with the I-5 in the middle of one of the region's last unspoiled watersheds. This massively destructive project, TCA insists, is the *least* environmentally destructive way to address South Orange County's traffic congestion problem.

But TCA never did the work required to back up its claim that there is no other way. Had it done so, it would have to concede that better traffic solutions potentially exist that, if

[172] *Parks Dept. Comment Letter* at 5.
[173] *Parks Dept. Mitigation Assessment*, Appendix C1 (before-and-after analysis showing severe visual disruption from Toll Road).
[174] *Consistency Application* at 75.
[175] *Parks Dept. Comment Letter* at.6; *Parks Dept. Mitigation Assessment*, Appendix C1.

implemented, will both protect our environment and expedite traffic relief.

Coastal Commission staff, in its September report, showed that several toll road alignments that avoid coastal resources have the potential to be implemented. Moreover, strategic improvements to the Interstate 5, including adding one High Occupancy Vehicle (HOV) lane to either side from the San Diego County line north to Lake Forest, Orange County, as well as adding improvements to some parallel arterials, *could relieve projected traffic congestion to a similar extent as the proposed Toll Road.*

These improvements can be done at a cost roughly comparable to the Toll Road, with a minimum of social and economic dislocation. This alternative would dramatically reduce if not completely eliminate impacts to coastal resources and environmentally sensitive habitat and wetlands. Unlike the Foothill-South, this alternative would not obliterate open space and would not destroy a state park. The existence of this feasible and environmentally superior alternative precludes granting a consistency certification to the Foothill-South.

A. Improving I-5 and Existing Arterials Could Provide Similar Traffic Benefits While Avoiding the Environmental Impacts of the Toll Road

The potential to achieve similar traffic relief by improving existing infrastructure has been described in detail by experts at Smart Mobility, Inc. ("Smart Mobility") and Phillip Williams & Associates in a newly revised study dated in January, 2008 ("Revised Smart Mobility 2008 Study" or "Revised Study"),[176] as well as in two earlier Smart Mobility studies.[177]

The Revised Smart Mobility 2008 Study supersedes the Smart Mobility study dated September 17, 2007, previously submitted to the Commission. The revised study incorporates amendments and responds to criticisms from TCA and the Orange County Department of Public Works, as well as comments from independent highway engineers. The revised study:

- Incorporates analysis of the potential impacts of a planned HOV lane on 3 of the 20 I-5 segments addressed, between the SR 1 and Avenida Pico interchanges;
- Incorporates analysis of planned auxiliary lanes on I-5 in San Juan Capistrano, near the SR 73 interchange;
- Revises the Ortega I-5 Interchange plan to be consistent with the ongoing San Juan Capistrano/Caltrans planning effort to improve this interchange;
- Revises the design of the Oso/Antonio and Crown Valley/Antonio arterial intersections in response to reviewer comments;

[176] Smart Mobility, Inc., *An Alternative to the Proposed Foothill South Toll Road: The Refined AIP Alternative: Design Modifications to Reduce Displacements*, January 2008 (hereafter, "*Revised Smart Mobility 2008 Study*").
[177] Smart Mobility, Inc., *AIP Alternative Refinement for the San Clemente I-5 Interchanges*, Feb. 2006; Smart Mobility, Inc., *A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project*, July 2005 (hereafter, "Smart Mobility 2005 Study").

- Revises the design of the Crown Valley/I-5 interchange based on reviewer comments;

- Revises a small number of detention basins in San Clemente due to recent changes in conditions (new development), and reviewer comments;

- Provides additional explanation and clarification of displacement issues on arterials raised by the County of Orange; and

- Provides additional explanation of Smart Mobility's background and the methodology for the Study.

The above revisions address the issues raised in response to the September 17, 2007 study, but importantly ***they do not substantially change that study's conclusion***: improvements to the I-5 and to parallel surface streets can feasibly provide similar traffic benefits to the Toll Road with a minimum of displacements, and without the sacrifice of an irreplaceable state park and unique coastal zone resources.

The AIP-Refined alternative ("AIP-R"), as it is described in the revised study, is based on the Arterial Improvements Plus alternative ("AIP") that TCA itself developed in a 2003 traffic study (the "Austin-Foust Study").[178] The Austin-Foust Study showed, *using its own data and assumptions*, that the AIP alternative *met project purposes as well as the Foothill-South.*[179] The AIP-R alternative is comparable to the AIP alternative in all respects relevant to the measurement of its regional-scale traffic performance.

But the biggest benefit of the AIP-R alternative relevant to the CZMA consistency process is that it provides all of the regional traffic benefits of the Foothill South *without its devastating impacts on biological and recreational resources.* By improving an existing road in urbanized areas, the AIP-R completely avoids impacts to San Onofre State Beach, including the loss of San Mateo Campground, impacts to Trestles, and all of the impacts to habitat and water quality associated with the Toll Road's route through the San Mateo Creek watershed. TCA's own FSEIR for the Project concluded that the AIP alternative was environmentally superior to all the Toll Road alternatives, including the proposed project.[180]

Moreover, as part of the AIP-R alternative, the current stretch of the I-5 that crosses the San Mateo Creek watershed within the coastal zone could be retrofitted with extended detention basins like those included in the Toll Road project, thus providing the same level of treatment for this segment without the corresponding degradation of the entire lower reaches of San Mateo Creek.

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[178] Austin-Foust Associates, *South Orange County Transportation Infrastructure Improvement Project Traffic and Circulation Technical Report*, December 2003 (hereafter "*Austin-Foust Report*").
[179] *See Smart Mobility 2005 Study* at 2-4, 5-11 (discussing and citing results of Austin-Foust Report).
[180] FSEIR, Executive Summary at 32 (the AIP alternative performed "well in impacts to riparian ecosystems, CSS and gnatcatchers"); *see also* FSEIR at Table 2.6-1 (summarizing comparative impacts; none of the Toll Road alternatives, including the selected alternative, performed as well as the AIP alternative in these categories).

B. **The AIP-R Alternative Would Likely Avoid Virtually All Property Displacements and Is Feasible.**

TCA summarily rejected the AIP alternative, and refused to analyze it in detail in the CEQA process, because TCA concluded that its construction would require the costly displacement of well over 1,200 residences and businesses, and was therefore infeasible. Notably, this conclusion was not supported by any meaningful analysis. TCA's displacement figures originated in a document entitled "Relocation Impacts Technical Report" (December 2003), but that document provided no analysis showing that any effort was made to reduce these impacts through design modifications.

On the contrary, TCA's design effort – of which, apparently, there exists no written record – produced a project footprint that at best completely disregarded the issue of displacements, and appears more likely to have been geared toward maximizing them. The right of way take along the mainline extends well beyond what is needed to construct new lanes. Interchange designs are selected with no regard to adjacent development, ignoring standard alternative designs commonly used throughout the country. Detention basins are placed on top of residential subdivisions. TCA did make an effort, however, to document all of the homes and businesses that would be displaced by its design.

In response to a Public Records Act request asking for all other documents relating to TCA's evaluation of displacement impacts for the AIP and other alternatives involving the improvement of the I-5 or existing arterials,[181] TCA produced only two studies – both relating to *toll road* alignments (the B and BX alternatives) – and stated that it had *no other documents* responsive to the request.[182]

Nor are TCA's displacement figures based on any analysis by Caltrans. Caltrans has acknowledged it had no substantive involvement with TCA's alternatives analysis. The Endangered Habitats League recently sought all information in the possession of Caltrans relating to the evaluation of alternatives during the environmental review process for the Toll Road. On February 15, 2006, Caltrans responded as follows:

> Your California Public Records Act request also requested any documents showing Caltrans review of I-5 improvement alternatives evaluated by the Transportation Corridor Agencies for the South Orange County Transportation Infrastructure Improvement Project.
>
> *Caltrans District 12 office has no review documents for the South Orange County Transportation Infrastructure Improvement Project*, as the Transportation Corridor Agencies were responsible for evaluation of the proposed project.[183]

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[181] *Letter* from William J. White, Esq. to Carolyn LeBail of TCA, dated Nov. 10, 2005 (request III, Item 6(d)) at 3.
[182] *Letter* from Carolyn LeBail of TCA to William J. White, dated Dec. 23, 2005 at 1.
[183] *Letter* from Pam Gorniak of Caltrans to Dan Silver of EHL, dated Feb. 15, 2006 (emphasis added).

TCA and Caltrans have failed to produce any documentation showing why TCA's AIP design could *not* have been revised to reduce the claimed displacements. The Revised Smart Mobility 2008 Study now affirmatively demonstrates that the vast majority of those displacements can potentially be avoided through design techniques applied by highway engineers throughout the United States in urban settings. By applying context sensitive engineering refinements, such as replacing partial cloverleaf interchanges with more land-efficient single point and tight diamond interchanges, *displacements can potentially be reduced an order of magnitude from TCA's estimates*.

Thus, the AIP-R alternative would potentially result in a nearly $1 *billion* reduction in TCA's estimated cost for the alternative, meaning that the AIP-R alternative is roughly cost-competitive with the Foothill-South project (which is now likely to exceed the $1 billion mark).

C. <u>The AIP-R Alternative Improves Interchange Safety</u>

With no design studies of their own, TCA and Caltrans have nevertheless expended considerable effort critiquing the earlier version of the Smart Mobility Study. Most recently, a January 7, 2008 Caltrans letter and TCA's January 9 Response document raise a number of specific issues with the design of certain interchanges and detention basins in that study. Ironically, several of the design concepts criticized – e.g., locating a detention basin (EDB-7B) on a hillside 20 feet above the highway – were in fact *designed by TCA itself*, and were not modified in the Smart Mobility Report. Nevertheless, most of the issues raised have already been addressed in the Revised Study, and additional responses will be provided to the Commission under separate cover.

One point does warrant brief mention here, however. A general theme of TCA's and Caltrans' objections is that the interchange designs do not meet all of Caltrans' standards and that, therefore, they are "unsafe." These arguments are flawed in at least two important respects. First, they misrepresent the nature and function of the study designs, which are intended to show first-level concepts, not engineering-level designs ready for Caltrans approval. The development and design of interchange projects is necessarily iterative, and it is through the review and revision process that designs evolve and are improved.

Second, TCA and Caltrans wrongly claim that Smart Mobility's interchanges are by definition "unsafe" because they appear, at first blush, to be inconsistent with Caltrans design standards. TCA and Caltrans have also used the terms "controlling criteria" or "mandatory standards" to imply that full compliance is an absolute requirement for approval by FHWA. This is not correct. When a proposed geometric feature does not comply with a mandatory standard, it is considered non-standard. Both FHWA and Caltrans have procedures for obtaining approval to use non-standard features. In built-up areas such as those along I-5, the approval for non-standard features is often a practical trade-off for severe right-of-way impacts. The presence of such features does not by itself make a roadway "unsafe" nor does it preclude approval.

Indeed, Caltrans has recently approved a number of alternative designs for the I-5 and Ortega Highway Interchange Project that would maintain existing distance between ramps and local road intersections (60 and 110 meters) despite inconsistency with the minimum standard

(125 meters).[184] This is the *same* inconsistency in the *same* intersection that, in critiquing the Smart Mobility Study, TCA described as a "serious safety issue."[185]

TCA and Caltrans also fail to point out that, as the example above illustrates, many of the *existing* interchanges along this portion of I-5 do not presently meet minimum Caltrans criteria. Even if all criteria could not be met, *the interchange designs in the Revised Smart Mobility 2008 Study could potentially provide a safety improvement over present conditions*.

Indeed, even if the Toll Road is built, the existing operational and safety problems that the AIP would have resolved will remain and will eventually need to be addressed. Caltrans will then be faced – albeit in piecemeal fashion – with many of the very same issues it has raised with the AIP alternative. The costs of resolving those issues – whether in the form of nonstandard features or greater number of displacements – eventually will have to be incurred *with or without the Toll Road*. TCA's attempt to attribute these costs solely to the AIP or other Toll Road alternatives is thus fundamentally misleading.

D. Financing and Governmental Authority to Construct the AIP-R Alternative Can Be Obtained.

TCA has asserted that the AIP-R alternative is infeasible because no funds are currently available to construct it. As discussed above, TCA has been assuming a cost for the alternative that is in the range of $1 billion too high. In terms of financing, the Foothill-South is in the same position; the Toll Road also has not yet secured the necessary funding.

More fundamentally, the lack of current funding for the AIP alternative is not due to a shortage of funds, but rather to the fact that funding for alternatives to the Toll Road has not been sought to date by regional transportation authorities. If the Foothill South ceases to become viable, real efforts to identify funding for an alternative such as the AIP-R will begin in earnest.

Notably, OCTA has already begun long-range planning efforts that include consideration of most of the elements of the AIP-R.[186] If the improvements contemplated by OCTA had already been demonstrated to be infeasible or were not capable of being funded, then the County's transportation planning authority would not be considering these options. But OCTA *is* considering them, because in fact they *are* feasible.

Indeed, much of what TCA summarily and without analysis dismisses as infeasible has long been planned by regional transportation authorities. These authorities concede that these improvements are needed *regardless of whether the Toll Road is built.* Since at least 2004, in the Southern California Association of Governments' Regional Transportation Plan, and in the Orange County Transportation Authority's 2006 Long Range Transportation Plan, many of the interchange improvements TCA attributes to an *alternative* to the toll road – the AIP-R – have already been deemed necessary. Because these improvements need to be built anyway according

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[184] *See* http://www.sanjuancapistrano.org/Index.aspx?page=398 (last visited January 16, 2008).
[185] TCA, *Response to Coastal Commission Staff Report*, January 9, 2008.
[186] Orange County Transportation Authority Stakeholders Working Group, *South Orange County Major Investment Study*, July 25, 2007, Alternative E – Alt C+HOT Lane Freeway Widening + High Transit (showing interchange upgrades and additional HOV lanes along I-5 in South OC).

to regional plans, TCA erroneously attributes their impacts on existing communities to *alternatives* to the Toll Road. In fact, they should be included in the baseline.

Finally, TCA has previously claimed that it lacks the authority to implement improvements on the I-5. TCA is a special entity created specifically to construct new thoroughfares funded by toll revenues, but it is made up of the County of Orange and nearly a dozen Orange County cities. Orange County and some of these same cities within the County also make up the governing board of the Orange County Transportation Authority ("OCTA"), the organization responsible for proposing and seeking funding for I-5 improvements in Orange County. It is therefore disingenuous for TCA to claim that it lacks authority to implement anything other than a new toll road, when its governing entities are key decision-makers on the OCTA Board of Directors.

Indeed, as of January 2007, the following jurisdictions were currently directly represented on both the TCA and OCTA Boards: Orange County, Tustin, Lake Forest, and Anaheim. But because *all* Orange County cities are in effect represented on the OCTA Board at some time, there is a complete overlap in jurisdiction between TCA and OCTA. *See* Pub. Utilities Code §§ 130050, 130052 (providing eligibility for all Orange County cities on the OCTA Board). Even if there were no complete overlap, OCTA and TCA have the legal ability to enter into partnerships to accomplish projects jointly, including improving arterials and the I-5, or even creating a new entity. *See* Pub. Utilities Code § 130240.1 (providing broad authority for OCTA to enter into partnerships). There is thus no basis for TCA to claim that its constituents have no ability to implement the AIP-R alternative.

In short, neither TCA nor Caltrans has ever seriously investigated the feasibility of providing the needed additional capacity on existing roads with minimal environmental damage, and with virtually no impacts on the coastal zone. The revised Smart Mobility study shows that it likely can be done with a minimum of displacements and at a roughly comparable cost. The existence of this environmentally superior, feasible alternative thus precludes a finding of consistency under the CZMA for the Foothill-South project.

III. <u>THE BALANCING PROVISION OF THE COASTAL ACT DOES NOT ALLOW FOR APPROVAL OF THIS PROJECT</u>

The Foothill-South Toll Road is clearly inconsistent with numerous sections of the Coastal Act that protect ESHA, parklands, wetlands, water resources, and public access and recreation. *See* Section I, *supra*. Yet TCA claims that these serious impacts are justified because, on balance, they are outweighed by the Toll Road's purported benefits to coastal resources. *See* Pub Res. Code § 30007.5. These benefits, TCA alleges, are increased public access, improved water quality, and needed emergency evacuation routes in case of a nuclear melt-down at San Onofre Nuclear Generator Station.[187]

TCA's assertions are baseless. The Staff Report correctly concludes that the Toll Road cannot be found consistent with the Coastal Act based on a balancing of conflicting Coastal Act policies under section 30007.5.

[187] *Consistency Application* at 8-10.

The California courts have applied this section only to projects that were necessary to advance a particular Coastal Act policy but could not be accomplished without violating another policy. *See, e.g., Sierra Club v. California Coastal Commission*, 19 Cal. App. 4th 547 (1993). In stark contrast, where a particular project is *not* necessary to advance any Coastal Act policy – or where the purported benefits will result only from measures offered in mitigation of a project's damage to other coastal resources – the courts have held section 30007.5 inapplicable. *See, e.g., Bolsa Chica Land Trust v. Superior Court*, 71 Cal. App. 4th 493, 506-09 (1999).

The Toll Road project falls squarely into the latter category. The purpose of the Toll Road is not to benefit coastal resources. It is a transportation project that, at best, is designed to provide congestion relief to the drivers of southern Orange County, mostly during peak hours. The benefits of the project would thus be received far from where the impacts would be felt on the coastal zone – indeed, in an entirely different county. State coastal and park resources would be sacrificed for the purpose of dealing with a problem created by the short-sighted land use decisions of local Orange County decisionmakers.

To the extent the Project would have any benefits to the coastal zone at all, those benefits are incidental at best. In fact, the purported benefits claimed by TCA all arise from measures that can be implemented without the Toll Road or attained with less destructive alternatives to the Toll Road. In short, there is no conflict to analyze here, and no competing policies to balance.

Even if the Toll Road project did present a conflict between Coastal Act policies, nothing supports a finding that construction of the Toll Road is, on balance, "most protective of significant coastal resources," as required by the Coastal Act. Pub. Res. Code § 30007.5. The Staff Report correctly finds that the Toll Road would result in environmental damage and irreversible impacts to coastal resources that would far outweigh any conceivable benefit it could produce.

A. <u>The Balancing Provision Is Triggered Only When the Project Is a Prerequisite to Advancing the Policies of the Coastal Act</u>

In certain limited circumstances, a project may raise conflicts between two or more policies in a manner that warrants the balancing test prescribed in Coastal Act section 30007.5. That section provides:

> The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

Pub. Res. Code § 30007.5. This Section has been interpreted to apply only when there is no way to advance the Coastal Act policy at issue without creating a conflict with another Coastal Act policy. *Sierra Club v. California Coastal Com. ("Batiquitos Lagoon")*, 19 Cal. App. 4th 547 (1993).

In *Batiquitos Lagoon*, the project at issue was a fish-habitat restoration project at a lagoon in Carlsbad that involved "conflicting interests of fish and fowl." *Id.* at 550. The primary purpose of the project was to provide a benefit to the coastal zone by opening the lagoon to tidal flows and thereby improving fish habitat. *Id.* at 553-554. A conflict arose because while increased tidal flows would restore fish populations in the lagoon in the long term, it would also reduce bird habitat in the short term. *Id.* at 552, 554 (noting a direct conflict between Coastal Act section 30230 (marine resources) and section 30233 (prohibiting dredging which would significantly disrupt marine life and wildlife habitats). Because enhancement of the fish habitat could not be achieved without impacting bird habitat, the court held that the Commission properly sought to balance these considerations under Section 30007.5. *Id*. at 559-540.

However, the courts have rejected attempts to stretch the application of the balancing test under Section 30007.5 beyond the narrow circumstances present in *Batiquitos Lagoon*. In *Bolsa Chica Land Trust v. Superior Court ("Bolsa Chica")*, 71 Cal. App. 4th 493, 509 (1999), the court sharply distinguished the housing development at issue from the habitat restoration project in *Batiquitos Lagoon*. The project proponent argued that notwithstanding the project's occupation of an ESHA in violation of the Act, the project was permissible under the balancing provision of section 30007.5 because it would create better raptor habitat offsite. *Id.* at 506-09. The court rejected this argument, ruling that there was no conflict in the first instance because "nothing in the record or briefs of the parties suggests there is such an acute need for development of residential housing in and around the eucalyptus grove that it cannot be accommodated elsewhere." *Id*. at 509. The court held that while the Commission may have a legitimate interest in preserving raptor habitat over the long term, there was no indication that building the project in an ESHA was the only way to effectuate that interest:

> [T]here is no evidence in the record that destruction of the grove is a prerequisite to creation of the proposed [off site] habitat. In the absence of evidence as to why preservation of the raptor habitat at its current location is unworkable, we cannot reasonably conclude that any genuine conflict between long-term and short-term goals exists.

Id. at 509.

Unlike the habitat restoration project in *Batiquitos Lagoon*, the Toll Road is not a project whose purpose is to effectuate an important public policy under the Coastal Act. It is a transportation project designed to benefit drivers in southern Orange County. TCA's claim that the project will also have incidental benefits to coastal resources is not enough to create a "conflict" that would trigger balancing under Section 30007.5. That section would apply only if the purported benefits could only be attained by constructing the Toll Road. This is plainly not the case.

Like the project proponent in *Bolsa Chica*, TCA seeks to create a policy "conflict" by offering to construct mitigation – in this case, facilities to treat stormwater from the I-5 – that will allegedly improve existing environmental conditions. However, as in *Bolsa Chica*, there is no evidence that the project is a prerequisite to the mitigation. It is not necessary to build a six-lane toll road through the San Mateo Creek watershed in order to add stormwater treatment

facilities to I-5. Such facilities could just as easily be made part of the I-5 widening alternative described in Section II above, or indeed could simply be constructed as a stand-alone project.

TCA asserts that neither TCA nor Caltrans can be "legally required" to construct these detention basins unless the Toll Road is built. This assertion is not only wrong (as discussed in Section B below), but also irrelevant. In *Bolsa Chica*, there was no legal requirement to create the new raptor habitat offered by the developer, yet the court held that the balancing provision was inapplicable because there was no evidence the new habitat could *only* be created via the proposed project. *Bolsa Chica*, 71 Cal. App. 4th at 509. Likewise, the proposed I-5 detention basins are not in any way dependent upon the construction of a toll road through coastal resources. Accordingly, the proposed basins cannot be used to justify the Project's inconsistency with Coastal Act policies.

The only other alleged benefits of the Toll Road – public access and public safety – are primarily based on the Project's traffic-related benefits, all of which could be attained through other alternatives while also avoiding impacts to coastal resources, including the loss of San Mateo Campground. As discussed in Section II above, widening I-5 and arterials is feasible and would provide equal or better congestion relief. In addition, alternative egress routes will also be provided by the planned extension of La Pata to Antonio Parkway.[188] Nor does TCA's eleventh-hour offer to write a check to the Parks Department create any conflict that warrants balancing of Coastal Act policies.

Because there is no evidence that the Toll Road must be built to attain the alleged coastal benefits of the project, the balancing provisions of Section 30007.5 are not applicable.

B. <u>The Project's Benefits to Coastal Resources Are Insubstantial and Are Not Comparable to the Severe and Irreparable Damage the Project Would Inflict on Those Resources.</u>

Even if the Coastal Act balancing provision were applicable, the Foothill-South would fail to provide significant benefits that outweigh its destructive impact. One of TCA's claimed benefits – improvements to water quality – seeks to solve a problem that does not exist in the relatively unspoiled San Mateo watershed. The other two alleged benefits – increased public access and the provision of an emergency evacuation route – are not only illusory, but are not recognized by the Coastal Act as benefits that could justify destruction of fragile coastal resources. The Project therefore cannot be considered "on balance… most protective of significant coastal resources." Pub. Res. Code § 30007.5.

1. Public Access Claims.

As noted above, the purpose of the Toll Road Project is to relieve peak hour congestion, not to provide access to the coast. TCA nevertheless argues that, it should be able to degrade ESHA, wetlands, and park resources so that those driving to the park can realize incidental traffic benefits. But the Coastal Act does not promote "public access" at all costs. The provision of public access must be consistent with environmental protection:

[188] *See Austin-Foust Report*, Figure 2-15; *Smart Mobility 2007 Study* at p 6.

> [T]he basic goals of the state for the coastal zone are to . . . [m]aximize public access to and along the coast and maximize public recreational opportunities in the coastal zone *consistent with sound resources conservation principles*.

Pub. Res. Code § 30001.5 (emphasis added). Other provisions of the Act likewise make clear that public access is not to be developed at the expense of fragile coastal resources. For example, Public Resources Code section 30212, in pertinent part, states:

> Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) *it is inconsistent with* public safety, military security needs, or *the protection of fragile coastal resources*.

Similarly, section 30210 provides "In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access . . . and recreational opportunities shall be provide for all the people *consistent with . . . the need to protect . . . natural resource areas from overuse*."

Here, TCA's proposal for increasing public access is to run a highway through the coastal lands at issue – including ESHA, wetlands, and parklands – in a manner that is clearly not consistent with "sound resources conservation principles" or "the protection of fragile coastal resources."

Moreover, TCA has not shown the Toll Road will provide any meaningful public access benefit. Public access routes already exist from inland areas to San Onofre (e.g., SR 91 to 55 or 57 to I-5), and TCA presents no evidence that the park, which gets over 2.4 million visitors per year, has public-access problems due to traffic congestion. TCA's own application materials show that I-5 segments in the vicinity of San Onofre generally are at or below 50% of capacity during peak hours (i.e., at LOS B and C).[189] Segments of I-5 north of San Onofre are currently experiencing some deficiencies, but only in peak hour travel directions and locations that do not affect access to the park.[190]

With respect to projected future increases in traffic, weekday peak hour conditions on the segments of I-5 nearest San Onofre are projected in the FSEIR to remain "uncongested" even under the "No Action" alternative reflecting the most likely development scenario for the year 2025.[191] Outside the immediate vicinity, there is only one "deficient" mainline segment of I-5 (between Avenida Pico and El Camino Real) that could conceivably affect southbound visitors attempting to reach the park, and then only during peak AM and PM hours.[192] TCA has provided no data or analysis regarding the travel patterns of San Onofre users or the extent to which they are affected by peak-hour travel conditions. There is simply no evidence that the projected level of future congestion poses any barrier to public access to the park, or that any significant number of park users would consent to pay a toll when free routes are available.

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[189] TCA Submittal 5, Response to Coastal Staff Questions of April 30, 2007, Item 2, Memo: Traffic on I-5 South of Orange County/San Diego County Border, Table A.
[190] *See* FSEIR Figs. 3.4-1, 3.4-2.
[191] FSEIR at 3-19 (describing "Scenario 3" – buildout of circulation system plus development of 14,000 dwelling units at Rancho Mission Viejo – as most likely future scenario); Fig. 3.4-5 (showing weekday peak hour conditions for "No Project" alternative).
[192] FSEIR Fig. 3.4-4.

Moreover, as discussed in Section II above, any traffic benefits provided by the Toll Road can also be provided by environmentally superior alternatives such as widening the I-5.

Far from improving public access to the coast, the Foothill-South would in fact vastly *diminish* such access. As discussed in Section I above, the alignment of the Toll Road virtually assures the abandonment of the San Mateo Campground, a facility that enables *over 100,000 visitors per year* to access the park's shoreline at low cost, and was itself created as *Commission-mandated mitigation to offset lost coastal access and ensure compliance with the Coastal Act.* Under no conceivable interpretation of the Act can the destruction of this vital coastal access resource be justified by the desire to shave a few minutes off travel time to the park.

Even if the Toll Road did result in an increase in park visitors, those visitors would have far fewer facilities – and much less park – to enjoy. To eliminate these resources, while at the same time adding visitors, would greatly exacerbate the trend of increased visitation that the Parks Department believes "will stress park resources and diminish the quality of park visitor experience."[193]

Finally, TCA's proposal to pay millions of dollars to the Parks Department cannot be used to balance away the Toll Road's dramatic adverse effects on public access to coastal recreational resources. As detailed in Section IV of this letter, there is no evidence that the State will be required to pay anything to renew the lease for San Onofre. Indeed, given the Department's conclusion that the Toll Road will force abandonment of the entire subunit in any event, it is likely most of the park would be gone by the time the current lease is up. Moreover, the restoration of a handful of cottages at Crystal Cove – which currently rent for an average of $175 per night for a family of four[194] – will do nothing to offset the loss of significantly less expensive camping opportunities at the San Mateo Campground. Once again, TCA's attempt to manufacture a conflict between Coastal Act policies should be rejected.

This Project does not come close to meeting the Coastal Act's policies regarding public access. Congestion relief can be provided as well or better by other alternatives and, in any event, cannot outweigh the Project's impacts on coastal access – much less the combined loss of public access, sensitive habitat, wetlands, and other coastal resources described in Section I.

2. Water Quality Claims.

TCA claims that the Foothill-South will advance Coastal Act policies relating to water quality by constructing new facilities that will treat pollution runoff from the existing I-5 corridor. But the San Mateo Creek, estuary, and beach have no known water-quality problem.[195] TCA fails to present any evidence that runoff from I-5 is having a significant impact on the water quality at San Mateo or Cristianitos Creeks or Trestles Beach. Indeed, the regional water quality

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[193] *Parks Dept. Mitigation Assessment* at A-3 to A-4.
[194] *See* California Department of Parks & Recreation, *News & Views* (Spring 2007), at 6.
[195] *See* San Diego Regional Water Quality Control Board, *2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments*, http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r9_final303dlist.pdf (last visited January 17, 2008).

control board has not identified any water bodies at San Onofre State Beach as impaired (i.e., failing to meet water quality standards).[196] The benefits to water quality would be insubstantial.

Moreover, contrary to TCA's assertion, Caltrans *can* be legally required to install treatment facilities on existing portions of I-5 by the Regional Board as a condition of its stormwater discharge permit, to the extent runoff is ever found to be causing a violation of a water quality standard.[197] In addition, according to staff at the San Diego Water Board, Caltrans' existing permit already requires the installation of the very measures offered by TCA in the event that *any* improvements are made to the affected segment of I-5. The Caltrans Stormwater Permit explicitly requires "Storm Water Drainage System Retrofitting." Specifically, "Caltrans shall seek opportunities to retrofit the Storm Water Drainage System for water quality improvement *whenever a section of the rights-of-way undergoes significant construction or reconstruction."*[198]

Moreover, the Coastal Act's balancing provision simply does not permit a conflict to be created by the applicant's offer of mitigation, particularly where (as here) that mitigation has no connection with the project itself. Otherwise *any* project would be able to invoke the balancing provision simply by offering some form of coastal mitigation, in contravention of the specific provisions of the Act that prohibit this.

As discussed in Section I above, the water quality problem facing San Onofre is not the lack of detention basins for the small segment of I-5 that crosses the San Mateo Creek watershed. The real problem is the threat of an entirely *new* highway constructed along *miles* of this relatively undisturbed watershed. As discussed earlier, there is no evidence that the detention basins for the Toll Road are capable of mitigating the significant impacts of the Toll Road on the water quality of San Mateo Creek. The Project will not provide any benefits to coastal water resources; it will only degrade those resources.

3. Evacuation Route Claims.

One of the most specious arguments presented by TCA is that the Foothill-South will provide an alternative evacuation route in case of a nuclear accident at SONGS or other disaster, and is therefore needed to promote a policy set forth in Section 30253 of the Coastal Act.

Section 30253 is inapplicable. That section states only that new development shall "minimize risks to life and property in areas of high geologic, flood and fire hazard." This simply requires that coastal-zone projects in high-hazard areas be designed to minimize *their own* safety risks. It in no way establishes a policy favoring development projects in the coastal zone that purport to have some alleged safety benefit.

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[196] *See id.*

[197] *See* State Water Resources Control Board, *Caltrans Stormwater Permit*, Section C.1-1 at 10 ("[t]he discharge of storm water from a facility or activity that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs) is prohibited").

[198] *Id*. at 15 (emphasis added); *see also* State Water Quality Control Board, *Fact Sheet for National Pollutant Discharge Elimination System for Storm Water Discharges*, Jul. 15, 1999, *available at* http://www.swrcb.ca.gov/stormwtr/docs/caltrans/caltranspmt.pdf (last visited January 16, 2008).

Even if section 30253 were relevant, there is simply no evidence that construction of the Toll Road is required to address safety concerns at SONGS. Neither the owner and operator of SONGS (Southern California Edison, Inc.) nor the agencies responsible for assuring the plant's safety (the Nuclear Regulatory Commission and the Federal Emergency Management Agency) even submitted comments during the Project's environmental review, much less identified the Toll Road as necessary to ensure public safety.

Moreover, alternatives such as the AIP-R alternative discussed in the Smart Mobility Study would also provide significant alternative egress in the event of an I-5 closure. The AIP-R calls for the completion of Avenida La Pata to Antonio Parkway, an improvement that has been independently planned by the City of San Clemente.[199] In addition to providing this alternative route, the AIP-R alternative would significantly expand the capacity of the *primary* evacuation route for southern Orange County – the I-5 – a benefit the Toll Road would clearly not provide.

Section 30253 does not apply to the Toll Road. Even if it did, there is no demonstrated public safety need for the Toll Road. Improved emergency egress, to the extent that it is relevant at all to the Coastal Act, can be provided by feasible alternatives to the Project without the need to destroy irreplaceable coastal resources. Public safety, like the other purported "benefits" of the Project, is another manufactured rationale designed to justify the Toll Road. It does not alter the Project's fundamental and fatal inconsistencies with the Coastal Act.

IV. TCA's Monetary Offer Cannot Make the Toll Road Consistent with the Coastal Act, Nor Would It Mitigate the Impacts of the Project.

Following the release of the Staff Report, and less than two weeks before the scheduled Commission hearing on the project, TCA announced that it would pay $100 million to "benefit" the state park system if the Toll Road is built.[200] According to TCA, the vast majority of this payment – $70 million – would be used to pay the U.S. Navy to extend its lease with the State for San Onofre after 2021. The remaining $30 million would be used for "improvements to recreational facilities at San Onofre and Crystal Cove State Park," and for "coastal sage scrub restoration within Crystal Cove."[201]

TCA's eleventh-hour attempt to buy its way out of compliance with the Coastal Act is not only disingenuous, but is unsupported by law. As discussed in Section I.A.1, above, the cases are clear that no amount of money or off-site "restoration" can be used to avoid the prohibition on destruction of ESHA.

But even if the law were otherwise, there is simply no merit in TCA's suggestion that the money will mitigate the impacts of the Project. There is no evidence that the State will be forced to pay the Navy to renew the lease for San Onofre, much less the exorbitant sum TCA claims.

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[199] *See Smart Mobility 2008 Study* at 8; *see also* Figure 4-2, City of San Clemente 1992 General Plan Circulation Element showing La Pata Extension, http://san-clemente.org/sc/Inf/Plans/General/Wd04.pdf (last visited January 16, 2008).

[200] TCA, "Toll Road Agency Announces $100 Million Offer to California State Parks" (Sept. 28, 2007), available at http://www.thetollroads.com/home/news_press_sept07a.htm (last visited January 16, 2008); Letter from M. Levario, TCA, to M. Delaplaine, CCC, Re: Amendment to Project Description for Consistency Certification No. CC-018-07 (Oct. 4, 2007).

[201] TCA, letter of October 4, 2007.

Nor is there any evidence that the proposed restoration money would create any new recreational facilities or habitat beyond what is already planned by the State. The proposal is merely an offer to finance what will occur with or without the Toll Road. It is not mitigation.

Compliance with the Coastal Act may not be purchased. TCA's offer in no way alters the Commission's findings that the Toll Road is inconsistent with the Act.

A. The Law Forbids Destruction of ESHA Regardless of Whether Off-Site Mitigation Is Provided.

No amount of mitigation can make the Toll Road consistent with key Coastal Act policies. Most importantly, the Project would destroy more than 50 acres of coastal sage scrub habitat and other ESHA lands within the coastal zone in violation of section 30240 of the Public Resources Code. The Staff Report has concluded, and TCA has not denied, that the Toll Road is not a resource-dependent use, which is the only type of use that would allow the project's construction through ESHA. Pub. Res. Code § 30240. The courts have clearly held that off-site mitigation, like that proposed by TCA, cannot legally be used to permit the destruction of ESHA by a non-resource-dependent use, regardless of how extensive the proposed mitigation. *See Pygmy Forest*, 12 Cal. App. 4th at 617. TCA cannot attain consistency with this policy by promising to restore habitat elsewhere.

B. The Money Offered by TCA Would Not Provide Mitigation.

1. There Is No Evidence that the State Will Need to Pay the Navy to Extend the San Onofre Lease.

The cornerstone of TCA's monetary offer is a $70 million payment that, according to TCA, would be used to renew the San Onofre lease in 2021. TCA and its supporters have gone so far as to suggest that the continued existence of the park would be in jeopardy without TCA's payment.[202]

But the basic premise behind the offer – TCA's assertion that changes in federal law will compel the Navy to obtain "fair market value" from the State – is faulty. In fact, federal law expressly authorizes the Secretary of the Navy to convey surplus military land for park or conservation purposes *without* charging the fair market value of the property. For example:

- 10 U.S.C. § 2694a authorizes the Secretary of the Navy to convey to a state non-excess property "to be used and maintained for the conservation of natural resources in perpetuity," at a price that takes into account the public benefit of the use of the property for conservation.

- 16 U.S.C. § 667b allows any federal agency to transfer property under its control for "wildlife conservation purposes" to a state wildlife agency "without reimbursement or transfer of funds."

[202] Letter from Thomas E. Margro, CEO, TCA, to Maidie Oliveau dated October 8, 2007; Letter from Richard T. Dixon and Peter Herzog to Governor Arnold Schwarzenegger dated October 17, 2007.

- 40 U.S.C. § 550(e) authorizes the sale or lease of surplus federal lands to a state "for use as a public park or recreation area" at a sale or lease value that accounts for the public benefit of the use of the property.

These provisions are reflected in the General Services Administration's property disposal regulations, which provide that federal property may be disposed of "at up to 100 percent public benefit discount for public benefit purposes," including "park and recreation . . . and wildlife conservation" purposes. 41 C.F.R. § 102-75.350.

Moreover, even if the Navy were to decide in 2021 not to declare the Park surplus property and instead sought fair market value for the lease renewal, there is no indication that this would require payment of more than a nominal rent by the State. It is unlikely the Navy would permit development of private commercial or residential structures within the base, which could conflict with its military mission. Accordingly, the Navy could reasonably determine that the land's highest and best use is retention as open space, and therefore has a low fair market value.

The Navy is also expressly authorized to accept in-kind consideration – including "[m]aintenance, protection, . . . or restoration (including environmental restoration)" – for its market value leases. 16 U.S.C. § 2667(b)(4), (c)(1)(A). The value of these services – which the State already provides at San Onofre, at no cost to the Navy – could further reduce any monetary rent paid for a market value lease. Indeed, the *annual* budget for maintenance and operations at San Onofre is roughly $2 million.[203] Over a 50-year lease term, the value of this annual in-kind contribution from the State could easily equal or exceed the fair market value of the land even assuming TCA's baseless figure of $70 million.

The most that can be said at this point in time is that the question of whether, when, and on what terms the federal government will convey a future lease, fee or other interest in the San Onofre property to the State is entirely speculative. But even under present federal law, there is nothing that would preclude the long-term operation of San Onofre at little or no cost to the State. Nor is there a shred of evidence to suggest that the state and federal governments would allow San Onofre – after a half century as a state park – to shut down over the issue of land rent. To the contrary, as discussed in Section I.B, above, it has always been the clear intent of both the state and federal governments that the land be preserved in perpetuity as park.

The primary threat to the park's continued existence is the Toll Road itself. Indeed, if the Toll Road were built, the resulting abandonment of most of the park and degradation of the remainder would largely moot the issue of lease renewal. The idea that we must destroy the park to save it is simply nonsensical. A contribution to future rent will do nothing to mitigate for the devastating and permanent loss of coastal park resources inflicted by the Toll Road.

2. TCA Has Not Identified Any New Recreational Facilities to Replace Those Impacted by the Toll Road.

[203] R. Rozzelle, Orange Coast District Superintendent, California Department of Parks and Recreation (pers. comm. Jan. 10, 2008).

TCA has suggested that $20 million of its offer could be used to construct recreational improvements at San Onofre or at Crystal Cove. But the State has already constructed or planned for recreational improvements in all appropriate locations in those parks. Providing a subsidy to the state for existing or programmed improvements does nothing to mitigate the additional loss of the San Mateo Campground and other recreational impacts of the Toll Road.

The only areas within San Onofre suitable for new campsite developments, as identified in the San Onofre General Development Plan, are within Subunit 1 of the Park[204] – the very subunit that the Parks Department concluded would be rendered *incompatible* with recreational use and need to be abandoned if the Toll Road were built. Indeed, the Toll Road would run directly adjacent to – and in some cases *through* – the very areas designated for future campsite development in the Park.[205] As discussed in Section I.B, above, the entire Subunit would likely be abandoned if the Toll Road is built, so it offers no opportunity for mitigation.

TCA has also suggested in at least one letter that the Bluffs Campground could be "enhanced" using the funds.[206] But the San Onofre General Development Plan states that the development of Subunit 4 (which includes the Bluffs Campground) is "completed" and "does not recommend any additional camping, day-use parking, or trails."[207] The Bluffs Campground, moreover, is situated in a highly developed location within a few hundred feet of I-5; additional campsites at the Bluffs will not even approximate the recreational experience afforded by the San Mateo Campground. In short, there is simply no way to replace at San Onofre the campsites impacted by the Toll Road.

Nor does Crystal Cove – 25 miles to the north of San Onofre – provide an opportunity for mitigation. The Parks Department has planned construction of a 60-site campground on the former site of the El Moro Mobile Home Park at Crystal Cove since at least 1982.[208] Late last year, the Parks Department finally was able to put the project out to bid; according to the California State Contracts Register, responses were due on January 11, 2008.[209] Now that the El Moro Mobile Home Park conversion project is underway, all campsite development called for by the Crystal Cove General Development Plan either has been or soon will be developed, regardless of whether the Toll Road is ever built.

Most recently, TCA has proposed that the Parks Department use the money to expand the campground at San Clemente State Beach. This option, however, would require relocation of the Parks Department's Orange Coast District Offices, many of which are currently housed in

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[204] *See* San Onofre State Beach General Development Plan Amendment (March 1984) at 34-36.
[205] *Compare* California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* (Aug. 1997) ("*Parks Dept. Mitigation Assessment*") at 6 (showing location of proposed improvements) *with* South Orange County Transportation Infrastructure Improvement Project Final Supplemental Environmental Impact Report ("*FSEIR*") (Dec. 2005) at Figs. 2.2-5, 2.2-6 (showing Preferred Alternative alignment).
[206] Letter from Thomas E. Margro, CEO, TCA, to Maidie Oliveau dated October 8, 2007.
[207] San Onofre State Beach General Development Plan Amendment (March 1984) at 36.
[208] Crystal Cove State Park General Plan (March 1982) at 43-44.
[209] Department of General Services, California State Contracts Register, available at http://www.cscr.dgs.ca.gov (last visited January 10, 2008).

historic buildings.[210] Furthermore, any new campsites at San Clemente State Beach would be located in an intensively developed urban environment at the edge of I-5, providing future visitors with a recreational experience dramatically different from that offered at the quiet, still-rural San Mateo Campground.[211] Again, mitigation for the loss of San Mateo Campground cannot be measured in a mere number of campsites. As the Parks Department itself has observed, "a certain quantity of recreation facilities . . . should not be forced into an available relocation site at the expense of providing a quality recreation experience or facility."[212] The experience of San Mateo Campground will be irrevocably lost, and TCA has proposed nothing comparable to replace it.

Finally, TCA has recently suggested that the money could be used to finance the restoration of the historic cottages at Crystal Cove, misleadingly citing the Crystal Cove Alliance (the official Cooperating Association at Crystal Cove) in connection with the proposal.[213] In fact, the Crystal Cove Alliance has condemned TCA's offer: "TCA's proposal is not the right answer for restoring Crystal Cove. We look forward to endorsing a plan that ensures that Californians can reach and enjoy every State Park, intact."[214] The 46 cottages at Crystal Cove provide a completely different – and far more expensive – recreational experience than the San Mateo Campground. For example, the Crystal Cove cottages rent for an average of $175 per night for a family of four, while a campsite at San Mateo Campground costs between $20 and $34 per night.[215] Moreover, a substantial portion of the Crystal Cove restoration effort is already completed, and fundraising efforts for its completion are underway. The cottages likely will be restored with or without the Toll Road.

In short, despite having years to consider the matter, TCA has never been able to identify any opportunities for creating new recreational facilities comparable to those that would be impacted by the project. TCA's last-minute monetary proposal would do nothing but subsidize the State's existing operations or planned projects. It is not mitigation. As the Commission's Staff Report correctly concludes, the San Mateo Campground and Trestles Beach are irreplaceable coastal resources, and the impacts of the Toll Road on these resources cannot be mitigated.

3. Funding Existing Coastal Sage Scrub Restoration Efforts Does Not Mitigate the Loss of Habitat.

TCA's offer to pay $10 million toward coastal sage scrub restoration at Crystal Cove would do nothing to offset the permanent loss of 50 acres of coastal sage scrub habitat at San

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[210] *See Parks Dept. Mitigation Assessment* at 6-7, Appendix B at 4; *see also* California Department of Parks & Recreation, *Relocation Preplanning Letter Report for San Onofre State Beach* (Aug. 1998) ("*Relocation Preplanning Report*") at 2, 5-7.
[211] *See Parks Dept. Mitigation Assessment* at Appendix C-2 (noise analysis describing "long periods of relative quiet" at San Mateo Campground).
[212] *Relocation Preplanning Report* at 8.
[213] TCA, "Toll Road Agency Announces $100 Million Offer to California State Parks" (Sept. 28, 2007), available at http://www.thetollroads.com/home/news_press_sept07a.htm (last visited January 16, 2008).
[214] *See* Crystal Cove Alliance, Press Release, "Crystal Cove Alliance Rejects Toll Authority Offer As Damaging to State Park System" (Oct. 1, 2007).
[215] *Compare* California Department of Parks & Recreation, *News & Views* (Spring 2007) at 6 *with* California Department of Parks & Recreation, *California State Parks Camping Fees*, available at http://www.parks.ca.gov/pages/737/files/web_camping.pdf (last visited January 10, 2008).

Onofre. According to a Parks Department ecologist, however, most of the restoration opportunities at Crystal Cove – and all those in the immediate coastal vicinity – have already been implemented. Any additional restoration will occur irrespective of TCA's proposal.[216] Furthermore, piecemeal coastal sage scrub restoration at Crystal Cove does not replicate the maritime complex of estuary, marsh, well-developed riparian habitat, and uplands that makes the coastal zone at San Onofre State Beach so rare and valuable. Thus, even if it were legally permissible to mitigate for the loss of ESHA with off-site restoration – which it is not – TCA's proposed monetary contribution would not provide any such mitigation.

In sum, the payment offered by TCA, however appealing from a financial standpoint, will not mitigate the impacts of the Toll Road in the slightest. And in any event, the Coastal Act prohibits the construction of the Toll Road through ESHA regardless of how much "mitigation" is offered.

CONCLUSION

The Foothill-South Toll Road is one of the most destructive proposals in the State of California today. It would pave over ESHA, parklands, and wetlands; it would harm endangered and threatened species; it would irreparably damage Native American sacred sites; and it would so degrade the surrounding areas as to render the San Mateo Campground unusable and threaten the water quality and surf conditions at world-famous Trestles Beach. This is exactly the type of project that the California legislature enacted the Coastal Act to prevent.

San Onofre State Beach is irreplaceable. But the Foothill-South is just one option – a bad one – for solving future traffic congestion. Feasible alternatives exist that would both resolve traffic issues and protect our coastal resources. San Onofre was meant to be preserved in perpetuity for future generations to enjoy.

On behalf of our organizations, and millions of members and activists they represent, we therefore urge the Commission to object to the consistency certification for the Foothill-South Toll Road.

Joel Reynolds
Senior Attorney
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Natural Resources Defense Council

Elizabeth Goldstein
President
California State Parks Foundation

Susan Jordan
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Dan Silver, MD
Executive Director
Endangered Habitats League

[216] D. Pryor, District Ecologist, California Department of Parks and Recreation (pers. comm. Jan. 7, 2008).

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cc: California Coastal Commission Staff

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January 17, 2008

Chairman Patrick Kruer
ATTN: Mark Delaplaine
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94108

Subject: Response to TCA comments on PWA watershed analysis

Dear Chairman Kruer and Commission Members:

The purpose of this letter is to respond to Transportation Corridor Agencies' (TCA) comments on PWA's January 2006 report, "Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area." TCA's comments can be found in "Response to Coastal commission Staff Report Released September 2007."

TCA's comment on Page 85 of their response report states, "These statements are based on a report prepared by PWA, dated January 11, 2006. Review of this report indicates that the results presented in Table 1 on page 18 are inaccurate." Also, "The results presented in the PWA report are erroneous and should not be relied upon to base conclusions relating to destabilization of these subwatersheds." TCA's comments go on to cite two sub-watersheds where PWA calculated 100 percent disturbance by the proposed road prism. They cite Figures 6 and 7 of the report as visual confirmation that 100 percent of watershed is not disturbed by the road prism.

TCA's comments are based on a misinterpretation of PWA's report. The third column of Table 1 on page 18 of PWA's report gives the percentages of the subwatershed disturbed by the road prism. As described in section 4.2 of PWA's report, these percentages are given as *the percentage of the subwatershed that lies upstream of the road crossing that is disturbed by the road prism*. The analysis is conducted in this way because numerous studies have shown that stream channel erosion (which generates fine sediment that is subsequently transported downstream to the river mouth) is highly sensitive to the percentage of the upstream watershed that is impermeable or disturbed (Bledsoe, 2001; Booth, 1990; 1991; Coleman and others, 2005; MacRae, 1992; 1993; 1996). Stream and watershed flows from the sub-watershed upstream of the proposed road crossing will be concentrated and discharged into the receiving creeks through culverts on the downstream edge of the road prism at this point. We therefore calculated the percentage of the *upstream contributing watershed that is disturbed at the point of discharge into the receiving water*. The percentages shown in the third column should not be compared to the total subwatershed areas shown in the second column.

Assessing channel erosion impacts at the point where the proposed project discharges into a receiving water body gives a more accurate measurement of the true scale of project impacts on headwaters tributaries and watersheds. This is especially important in headwaters areas since while these areas constitute a relatively small portion of the total watershed *area* for San Mateo Creek, they are the source of most of the eroded *sediment*, the other areas being dominated by sediment transport or deposition. Simply looking at the percentage of the total watershed impacted by impervious area ignores these localized but highly significant stream impacts. Studies in California and elsewhere have shown that the erosion impact to a stream channel is exponentially proportional to percentage of the upstream watershed that is impermeable (see figure below).

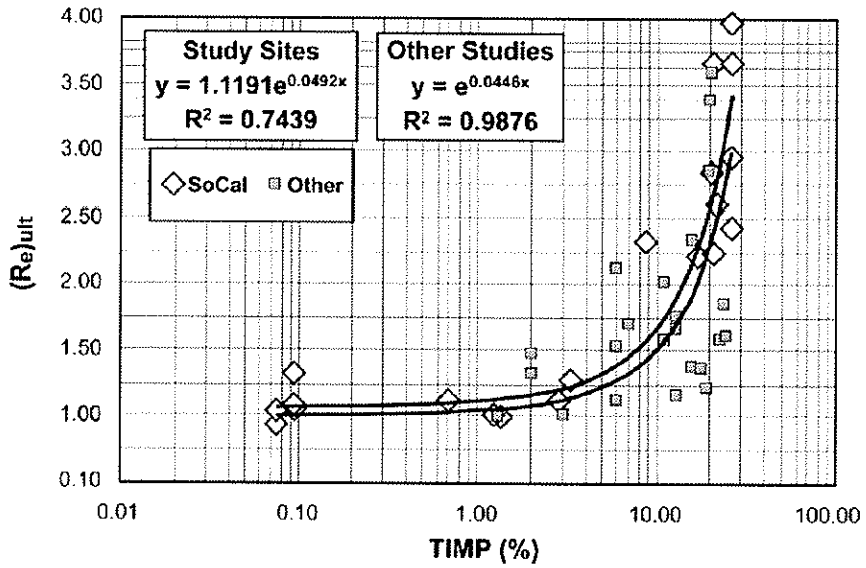

Figure ES-2. Enlargement Curve for Southern California.

Upper curve and data points are for southern California channels in the current study. Lower curve is based on data from other locations in North America.

The figure above (source: Coleman and others, 2005) shows the percentage of a watershed that is impermeable upstream of a point along a channel (TIMP) versus the ratio of channel enlargement through erosion that results (Re). As can be seen, increases in the area of the upstream watershed that is impermeable of between 5-10% cause channels to erode until they have enlarged their volume by 25-50%, with increases in impermeable area between 10 and 20% causing channel sizes to double or more. This process of channel enlargement generates large volumes of sediment that is transported downstream to the main river channel and ultimately to the river mouth.

TCA's comments cite subwatersheds SM-04 and C-13 as examples of erroneous calculations as they show that 100 percent of the subwatershed area upstream of the road crossing will be impacted by the road prism. SM-04 has a total watershed area of 219 acres, and an upstream subwatershed (defined as the area draining to the proposed road crossing culvert) of about 29 acres. The proposed road prism will occupy about 29 acres of this upstream subwatershed area. This indicates that 100 percent of this portion of the subwatershed will be disturbed by the proposed road prism. Similarly, the proposed project is expected to add about 4.6 acres of impermeable area, which is about 16 percent of the subwatershed area upstream of the proposed road crossing, within the range that would be expected to cause the receiving creek channel at the discharge point to approximately double in size. Subwatershed C-13 upstream of the proposed road crossing is also calculated as being 100 percent occupied by the road whereby the entire six acre portion of the subwatershed is proposed be disturbed by the road prism.

An annotated table is attached to this letter quantifying the subwatershed areas, subwatershed areas upstream of proposed road crossings, disturbance areas, proposed new impermeable areas and associated percentages. This table shows in detail how the percentages of disturbed and impermeable area were calculated.

Sincerely,
PHILIP WILLIAMS & ASSOCIATES, LTD.

Andrew Collison, Ph.D.
Principal

Jeffrey Haltiner, P.E., Ph.D.
Vice President

Enclosures: Revised Table 1
List of References

cc: Dan Silver, Endangered Habitats League
Bill White, Shute, Mihaly & Weinberger

Revised Table 1. Percentage of subwatershed area upstream of road crossing disturbed and made impermeable.

Watershed Identifier	Subatershed Area (ac)	*Subwatershed Area Upstream of Road Crossing (ac)*	*Disturbance Area (ac)*	*New Impermeable Area (ac)*	Percentage of Subwatershed Area Upstream of Road Crossing Disturbed by Road Prism	Percentage of Subwatershed Area Upstream of Road Crossing Impermeable at Culvert Discharge Point
SM_01	443	*89*	*63*	*25*	70%	29%
SM_02	99	*76*	*17*	*4*	23%	5%
SM_03	91	*67*	*26*	*5*	38%	7%
SM_04	219	*29*	*29*	*5*	100%	16%
SM_05	81	*81*	*12*	*2*	15%	3%
SM_06	69	*69*	*25*	*5*	36%	7%
SM_07	202	*202*	*5*	*0*	2%	0%
SM_08	99	*42*	*38*	*7*	92%	16%
C_09	148	*74*	*34*	*6*	46%	8%
C_10	311	*145*	*52*	*7*	36%	5%
C_11	155	*106*	*36*	*6*	34%	6%
C_12	182	*154*	*62*	*14*	40%	9%
C_13	140	*6*	*6*	*0*	100%	0%
C_14	214	*207*	*51*	*7*	25%	4%
C_15	73	*54*	*12*	*3*	22%	6%
C_16	179	*176*	*11*	*1*	6%	1%
C_17	334	*66*	*53*	*16*	80%	24%
C_18	187	*78*	*32*	*7*	42%	9%
C_19	348	*160*	*59*	*13*	37%	8%
C_20	359	*110*	*50*	*9*	45%	8%

Note: SM denotes subwatershed draining to San Mateo Creek mainstem, C denotes subwatersheds draining to Cristianitos Canyon. Subwatersheds are numbered from downstream to upstream. See Figures 6 and 7 in PWA, 2006 for locations.

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EXHIBIT E

May 28, 2008

Via E-mail: gcos.comments@noaa.gov and Hand Delivery

Thomas Street
NOAA Office of General Counsel for Ocean Services
1305 East-West Highway
Room 6111
Silver Spring, MD 20910

Re: Comments on Appeal of Foothill/Eastern Transportation Corridor Agency Pursuant to the Coastal Zone Management Act

Dear Mr. Street,

The Foothill/Eastern Transportation Corridor Agency ("TCA") has appealed an exhaustively researched, carefully considered determination by the California Coastal Commission ("Commission") that TCA's proposed Foothill-South toll road project (the "Toll Road" or the "Project") is fundamentally and fatally inconsistent with California's approved coastal management program under the Coastal Zone Management Act ("CZMA").

The proposed Toll Road is the greatest threat facing the California coast today. As Peter Douglas, the Commission's Executive Director, stated at the Commission's hearing in this matter, the devastating impact of this project on California's coast cannot be overstated:

> The fact is that [the Toll Road] is unmitigable under the law, that it so clearly fails to meet so many Coastal Act policies, and that it raises profound questions about our environmental and social future in coastal California, and the glaring negative precedent it would set, by among other things, destroying a heavily used state

> park . . . . ***Since passage of the California Coastal Act in 1976, I know of no other coastal development project so demonstrably inconsistent with the law . . . . This toll road [project] is precisely the kind of project the Coastal Act was intended to prevent***.[1]

As shown in the Commission's briefing in this proceeding, and as further elaborated herein, TCA's appeal is without legal or factual merit. Accordingly, the undersigned organizations –Audubon California, California Coastal Protection Network, California State Parks Foundation, Defenders of Wildlife, Endangered Habitats League, Laguna Greenbelt, Inc., Natural Resources Defense Council, Orange County Coastkeeper, Sea and Sage Audubon Society, Sierra Club, Surfrider Foundation, and WiLDCOAST/COSTASALVAjE – respectfully request that the Secretary of Commerce deny TCA's appeal and uphold the Commission's objection to the Toll Road project.[2]

Despite TCA's repeated acknowledgement in its environmental documents that the Toll Road would be subject to CZMA consistency review, and despite the unprecedented investment of resources on the part of the Commission and the public to review TCA's consistency certification submittal, TCA now argues that the entire review process was a mistake and should be disregarded on various procedural grounds, including the astonishing claim that the Toll Road is not within the coastal zone. These arguments are completely unsupported by the applicable law, which demonstrates that the Commission properly exercised its jurisdiction under the CZMA..

TCA's substantive arguments as to why the Secretary should override the Commission's objection fare no better. TCA has failed to carry its burden of proving that the Toll Road meets the threshold test of substantially and significantly advancing a relevant national interest, let alone that such interest outweighs the Toll Road's adverse impacts on coastal habitats, endangered species, irreplaceable cultural and recreational resources, water quality, and wetlands. Moreover, as the Commission properly determined, there are specific and reasonable alternatives available that could achieve the primary purpose of the project without permanently sacrificing these irreplaceable coastal values. TCA's separate and cursory argument based on national security is likewise completely baseless. The only real threat to national security here – permanent encroachment on Camp Pendleton and unmitigable impairment of its military mission – would come from building the Toll Road, not from denying this appeal.

TCA's appeal thus satisfies neither of the two statutory bases for a determination in its favor. The Toll Road is inconsistent with the CZMA and would have a detrimental impact upon national security. Accordingly, the appeal must be denied.

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[1] TCA App. 3-7 at 62-63 (PDF pp. 69-70) (emphasis added).

[2] The undersigned organizations request that this letter and all exhibits hereto, including the exhibits hand-delivered under separate cover to the offices of NOAA General Counsel by courier, be made part of the decision record in this proceeding. We also understand that the Secretary has ordered a public hearing in this matter, and that the public comment period will be reopened upon publication of the Federal Register notice for the hearing. 15 C.F.R. § 930.128(d). We reserve the right to supplement these comments during the re-opened public comment period.

I. The Toll Road Poses the Single Greatest Threat to California's Coast Today.

The Foothill-South Toll Road was initially proposed in 1981 as an option for alleviating existing and anticipated congestion on Interstate 5 ("I-5") in southern Orange County. It became one of the options studied as part of the South Orange County Transportation Infrastructure Improvement Project ("SOCTIIP"). In 2004, TCA and the Federal Highway Administration prepared a Draft Environmental Impact Statement/Subsequent Environmental Impact Report ("DEIS/SEIR") for the SOCTIIP project. However, without awaiting completion of the final SOCTIIP EIS, TCA forged ahead with a Final Subsequent Environmental Impact Report ("FEIR") and approved its "preferred alternative" in early 2006.[3] The legality of TCA's approval of the Toll Road is being challenged in pending litigation, including two lawsuits filed by the California Attorney General.[4]

As approved by TCA, the Toll Road would involve the construction of a six-lane highway[5] through sixteen miles of largely undeveloped lands in one of the most environmentally sensitive areas in California. The road would run through lands that are currently set aside for open space, recreational, and preservation purposes, including four miles of San Onofre State Beach ("San Onofre") as well as the inland Donna O'Neill Land Conservancy.

San Onofre, created in 1971, is one of California's most popular state parks. It receives over 2.4 million visitors per year, provides habitat for 11 endangered or threatened species, and offers low-cost recreational opportunities, including camping and surfing, for

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[3] *See generally* Appellant's Appendix ("TCA App.") at binder 18, tabs 36-37. Citations to TCA's Appendix hereafter will use the following form, which is generally the form used by the parties: "TCA App. [binder no.]:[tab no.]," followed by the page number of the document cited, and a parenthetical containing the page number within the PDF document that contains the document cited (e.g., "TCA App. 1-4(L) (PDF pp. 10-54)"). TCA's decision not to provide a complete index of the materials submitted to the Commission makes it difficult to ascertain whether certain documents submitted to the Commission, especially by project opponents, are included in the Appendix. Accordingly, we attach as exhibits certain letters and expert reports that are not indexed in the Appendix.

[4] The first of these, brought on behalf of the People of California and the California State Parks Commission, is one of two lawsuits contending that TCA violated the California Environmental Quality Act ("CEQA") in approving the project. *People ex rel. Attorney General Bill Lockyer and State Park and Recreation Commission v. Foothill/Eastern Transportation Corridor Agency et al.*, No. 06-GIN051371 (S.D. Super. Ct. filed March 23, 2006). The second was filed on behalf of the Native American Heritage Commission – at the request of Acjachemen people – for violation of laws protecting Native American resources. *Native American Heritage Commission v. Foothill/Eastern Transportation Corridor Agency et al.*, No. 06-GIN051370 (S.D. Super. Ct. filed March 23, 2006). These lawsuits spotlight TCA's failure to adequately disclose to the public the environmental and cultural impacts of the Project, including impacts to a range of coastal resources. The Attorney General's CEQA lawsuit, along with a consolidated CEQA case brought by environmental organizations, have been stayed by agreement of all parties pending the outcome of this appeal proceeding.

[5] TCA repeatedly mischaracterized the project in the proceedings below as a 4-lane highway. The "initial" configuration of the facility through San Onofre will have four lanes operational, but the "ultimate" facility will expand to six lanes. *See* TCA App. 20/21-49 at 2-3 (PDF p. 57). Indeed, TCA's traffic analysis for the Toll Road assumed that the full six lanes would be operational along the entire highway corridor *See* TCA App. 41/42-65 at 1-12 (PDF p. 122). TCA's projected Toll Road traffic would *exceed the maximum capacity* of a four lane facility. *See* Smart Mobility, Inc., *Capacity Analysis for the Proposed Foothill-South Toll Road* (Jan. 28, 2008) (attached hereto as Exhibit 43).

working-class families. In addition, certain recreational facilities in the park, including the San Mateo Campground, were developed as a condition of the Commission's coastal development permit for the San Onofre Nuclear Generating Station ("SONGS") project to offset the significant loss of coastal access.

TCA's proposal to build the Toll Road through San Onofre is an unprecedented assault on California's state park system. If built, the Toll Road would represent *the first time in California that state park lands were taken by a local governmental entity for a major infrastructure project*.

But the Toll Road would do more than just devastate a coastal state park. The total environmental impact of the Toll Road on the coastal zone, San Onofre, and the surrounding landscape would be immense. Among other things, the Toll Road would:

- Destroy, degrade, or fragment important habitat for eleven threatened or endangered species found within the park or the surrounding San Mateo Creek watershed.

- Irreparably damage sites sacred to the Acjachemen/Juaneño people, including a village that is listed in the state Sacred Lands file, used for ceremonies and reburials, and eligible for inclusion on the National Register of Historic Places.

- Threaten the water quality of the watershed and the coastal waters to which it drains, including the world-class surfing beach known as Trestles.

- Cause the permanent loss of coastal wetlands.

- Degrade or permanently destroy more than 50 acres of undisputed ESHAs in and around the coastal zone.

- Ruin San Onofre's most popular low-cost visitor-serving recreational area – the San Mateo Campground. The campground is a critically important coastal recreational resource that *the Commission itself* required be created in the 1970s to offset the coastal impacts of the San Onofre Nuclear Generating Station.

There is simply no way to mitigate this kind of harm, no way to balance away the extent of the Project's destruction.

TCA seeks to justify its project by denying there are feasible alternatives capable of addressing the Toll Road's central purpose – i.e., relieving traffic congestion on Interstate 5 ("I-5") and in southern Orange County. Yet TCA has failed to come forward with evidence demonstrating that other alternatives are infeasible. To take just one example, TCA's own data show that a widening of the existing I-5 and selected adjacent arterials (the "AIP" alternative) would provide congestion relief similar to the Toll Road. But this alternative was never seriously pursued by TCA. Instead, the agency proposed a footprint for the alternative that was designed to fail: right-of-way, interchanges and detention basins were placed and designed to

maximize residential and business displacements, which TCA has used as the sole basis for dismissing this alternative ever since. For these conclusions, TCA relied heavily on standards and opinions of the California Department of Transportation ("Caltrans"). However, as discussed in this letter, Caltrans contractually obligated itself to support the Toll Road 15 years ago – and thus cannot be considered an objective source of information about the feasibility of alternatives.

The overwhelming evidence shows that, with basic modifications to the AIP alternative using standard concepts of urban-context highway design, the vast majority of the purported displacements can be avoided. TCA has never provided a single document -- no report, no study, no analysis -- evidencing any attempt to make such modifications. Instead, TCA has directed its efforts at criticizing the studies showing that alternative designs do in fact exist. These criticisms have been addressed in updated studies that have been reviewed by some of the best and most experienced highway engineers in the nation, and the conclusion remains the same: the I-5 can be fixed without the massive displacements alleged by TCA. There is simply no need to build a toll road through San Onofre State Beach.

TCA's attempt to characterize this project as necessary for national security -- a claim TCA never made for the project until now -- is beyond disingenuous. In fact, the Navy's stated preference is that the road not be built in this location at all due to the project's serious and detrimental encroachment impacts. In a letter that TCA failed to include in its Appendix, General J. L. Jones, Commandant of the Marine Corps, stated as follows:

> ***Frankly, my preference is that the proposed toll road not be constructed on or near Camp Pendleton.*** If constructed on Camp Pendleton, the Marine Corps loses land needed for training to ensure readiness. If constructed near Camp Pendleton, the road facilitates increased urbanization adjacent to the base, which in turn will lead to noise complaints from new residents. ***This construction is one more encroachment venture that will hinder our ability to prepare for war***.[6]

TCA completely fails to acknowledge these impacts in its briefing here, despite having concluded in its own environmental review of the Toll Road that the project's effect on Camp Pendleton would be significant, adverse, and largely unmitigable.

In light of the Toll Road's numerous, irreconcilable conflicts with the California Coastal Act (the State's coastal management program under the CZMA), the Commission objected to TCA's consistency certification for the Toll Road.[7] As shown in detail below, the objection was entirely proper, and no basis exists in the CZMA for an override.

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[6] Gen. J.L. Jones, Commandant, U.S. Marine Corps, Letter to Christine Todd Whitman, Environmental Protection Agency (Feb. 9, 2002) at 2 (emphasis added), (attached as Exhibit 1).

[7] Several of the undersigned organizations submitted detailed comments to the Commission concerning the Toll Road's inconsistency with the California Coastal Act. Those letters, and the exhibits and citations referenced therein, are incorporated by reference as if set forth fully in this letter. The text of these letters can be found at TCA App. 2-5(D) (PDF pp. 32-56) and 2-6(E).

II. As a California Public Agency, TCA Must Comply with the California Coastal Act by Applying For and Obtaining a Coastal Development Permit from the Commission, Separate and Apart from CZMA Compliance.

A. The California Coastal Act Provides a State-Level Mechanism for Resolving Any Dispute Between TCA and the Commission Regarding Compliance with California's Coastal Management Program.

In its February 28, 2008 briefing order in this matter, the Assistant General Counsel for NOAA ordered TCA to "address whether a dispute between two components of the same state properly forms the basis of an appeal to the Secretary under the CZMA, and what, if any, state-level mechanisms exist to mediate and resolve disputes that arise between California public agencies regarding compliance with California's coastal management program."

TCA responded to this question by asserting that "California law does not provide any state-level mechanism that might serve to mediate and resolve the instant dispute." TCA's Principal Brief ("TCA Br.") at 10. TCA is incorrect. There is a state-level mechanism for resolving this dispute, namely the coastal development permit process under the California Coastal Act.

TCA is a local public agency, composed of representatives of Orange County and several Orange County cities, operating pursuant to a specific grant of authority by the California Legislature. *See* Cal. Gov. Code § 66484.3. As a public agency, TCA has an independent and binding duty to comply with the California Coastal Act. Cal. Pub. Res. Code §§ 30003, 30118. Like all public agencies seeking to develop in the coastal zone, TCA must apply for and obtain a coastal development permit from the Commission for the Toll Road project. Cal. Pub. Res. Code § 30600(a). The Coastal Act thus provides a comprehensive "state-level mechanism" for adjudicating and resolving any question as to whether the Toll Road is consistent with California's coastal management program. *See* Cal. Pub. Res. Code §§ 30620-30627 (establishing application, hearing, and reconsideration procedures). TCA has not yet attempted to avail itself of this process.

TCA's observation that the Coastal Act does not provide a process by which the Governor or other government officials who support a project can override a decision by Commission (TCA Br. at 10) misses the point entirely. The Coastal Act specifically provides that, to "minimize duplication and conflicts among existing state agencies," no other state agency may exercise any powers or carry out any duties under the Coastal Act absent specific authorization or an agreement with the Commission. Cal. Pub. Res. Code § 30400. The California Legislature thus has made clear that the Commission – not the Governor or other state officials – is in charge of Coastal Act compliance. The "dispute" at issue is between TCA and the Commission. The Coastal Act spells out exactly how this dispute must be resolved: TCA must seek and obtain a coastal development permit from the Commission.

In this light, the Commission is correct to suggest in its briefing that the Secretary cannot grant TCA the relief it seeks here: authority to construct the Toll Road in its preferred location. The substantive standards of the Coastal Act that govern consistency review are the

same substantive standards that would govern review of any coastal development permit. See Cal. Pub. Res. Code §§ 30200 *et seq.* In objecting to TCA's consistency certification, the Commission has already determined that the Toll Road is fundamentally inconsistent with a number of enforceable Coastal Act policies. In other words, the Toll Road is not a legally feasible alternative under California law, and TCA cannot construct it in the proposed location even if it were consistent with the CZMA.

B. Congress Has Clarified that the Toll Road Must Comply with California Law.

Throughout its briefing, TCA relies heavily on an act of Congress authorizing the Secretary of the Navy to grant an easement across Camp Pendleton to accommodate the Toll Road subject to certain limitations. That statute – which is actually a limit on, not an expansion of, the Navy's existing authority to grant easements -- was amended this year to remove any doubt that the Toll Road must fully comply with California law.

The Strom Thurmond National Defense Authorization Act for 1999 placed certain limitations on the authority of the Secretary of the Navy to convey an easement through Camp Pendleton "to permit the recipient of the easement to construct, operate, and maintain a restricted access highway." Pub. L. No. 105-261, § 2851(a), 112 Stat. 1920, 2219 (Oct. 17, 1998).[8] In 2002, language was added to state that the Navy could grant an easement under the statute "notwithstanding any provision of State law to the contrary." Pub. L. No. 107-107, § 2867, 115 Stat. 1012, 1334 (Dec. 28, 2001). But this language was repealed earlier this year amid suggestions by TCA that the statute exempted the Toll Road from state law requirements. Pub. L. No. 108-110, § 2841, 112 Stat. 3, 552-53 (Jan. 28, 2008).

Congress has thus made absolutely clear that the Toll Road project must fully comply with California law. *See* H.R. Rep. No. 110-477, at 1251 (2008) (explaining that purpose of amendment was to "remove language that limited the effect of State law with respect to this road."). This includes compliance with the California Coastal Act and its coastal development permit requirements. As discussed above, the Toll Road has been found by the Commission to be inconsistent with the Coastal Act, and therefore any coastal development permit application for the Project would have to be denied.

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[8] The Secretary of the Navy already has general statutory authority to grant easements, not only for roads, but for any purpose the Secretary deems advisable. *See* 10 U.S.C. § 2668(a)(9), (13). The statute in question imposes additional conditions on any grant of a roadway easement through Camp Pendleton, including limits on use of proceeds, and in no way requires or promotes the grant of such an easement. Compare 10 U.S.C. § 2668(e) (permitting in-kind consideration and discussing general uses of proceeds from easements) with Pub. L. No. 105-261, § 2851(b), (c), (e).

III. TCA's Jurisdictional and Procedural Arguments Lack Merit.

A. The Commission Properly Exercised its Jurisdiction to Review the Toll Road for Consistency with the CZMA.

The Commission has jurisdiction to review the Toll Road for consistency with the State's coastal management program pursuant to the CZMA. 16 U.S.C. § 1456. Specifically, the CZMA requires that

> any applicant for a Federal license or permit, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program.

16 U.S.C. § 1456(c)(3)(A).

After seeking the Commission's concurrence in its consistency certification, submitting tens of thousands of pages of materials for the Commission to review, and participating in the largest public hearing in the Commission's history, TCA now contends, incredibly, that the Commission never had any authority to make a consistency determination in the first place. TCA asserts that the Coastal Zone simply does not exist within San Onofre. TCA further asserts that, to the extent the Toll Road does lie within the coastal zone, the Commission improperly considered impacts of portions of the project outside of the coastal zone. None of these arguments has merit.

1. The Toll Road Is Within the Coastal Zone as Defined by the CZMA.

The CZMA excludes from the Coastal Zone "lands the use of which is by law subject *solely to the discretion of . . . the Federal Government*, its officers or agents." 16 U.S.C. § 1453(1) (emphasis added). This exclusion does not apply here, because the use of the land over which the Toll Road would run is not "by law subject solely to the discretion of" the federal government. To the contrary, the federal government has expressly ceded legislative jurisdiction over this land to the State of California.

a. San Onofre State Beach Is Not a "Federal Enclave" and Is Not Subject "Solely" to Federal Jurisdiction.

According to TCA, the Toll Road is outside the coastal zone as defined by the CZMA because Camp Pendleton is a "federal enclave"[9] subject to the exclusive legislative

[9] TCA uses the term "federal enclave." However, that concept applies when determining the applicability of *state* law to federal property. Because the CZMA is federal law, the issue is not whether the property is a federal enclave, but whether it falls within the CZMA's definition of "coastal zone." In any case, the property at issue is under the jurisdiction of the State of California and is therefore neither a federal enclave nor excluded from the coastal zone.

jurisdiction of the federal government. However, the entire portion of Camp Pendleton in which the Toll Road would be located – San Onofre State Beach -- is subject to state jurisdiction. Accordingly, it is neither a federal enclave nor excluded from the coastal zone under the CZMA.

A "federal enclave" is an area in which legislative jurisdiction has been ceded to the federal government by consent of the state. *See Paul v. United States*, 371 U.S. 245, 264-65 (1963); *Taylor v. Lockheed Martin Corp.*, 78 Cal. App. 4th 472, 481-82 (2000). However, "[f]ederal jurisdiction, once properly obtained, does not necessarily persist in perpetuity. The federal government may surrender jurisdiction over state lands back to the state" through a process known as "retrocession." *Atlantic Marine Corps Communities, LLC v. Onslow County, North Carolina*, 497 F. Supp. 2d 743, 755 (E.D.N.C. 2007). California has adopted retrocession statutes allowing the State to reacquire jurisdiction over lands formerly within a federal enclave. *See* Cal. Gov. Code § 113; Cal. Str. & Hwys. Code § 77.5. Indeed, all jurisdiction ceded to the United States by the State of California is expressly "limited by the terms of any retrocession of jurisdiction heretofore *or hereafter* granted by the United States and accepted by the State." Cal. Gov. Code § 115 (emphasis added).

When Camp Pendleton was acquired by the federal government in the 1940s, jurisdiction over the property was ceded by California to the federal government, and it became a federal enclave. *United States v. Jenkins*, 734 F.2d 1322, 1325 & n.2 (9th Cir. 1983). However, the federal government has since offered, and California has accepted, a retrocession of jurisdiction over San Onofre and the I-5 corridor to the State of California.[10] The State accepted concurrent jurisdiction over San Onofre in November 1973, consistent with California Government Code section 113.[11] The State also assumed legislative jurisdiction over the parcels underlying I-5 in September 1974 pursuant to California Streets and Highways Code section 77.5.[12] These areas are, therefore, by definition no longer "federal enclaves." More importantly, because they are no longer "solely" subject to federal jurisdiction of the federal government, they are not excluded from the coastal zone under the CZMA.

The cases cited in TCA's briefs for the proposition that Camp Pendleton is a "federal enclave" are irrelevant, since they either pre-dated the retrocession of San Onofre or involved other portions of the base. *See California v. United States*, 235 F.2d 647, 655-56 (9th Cir. 1956); *United States v. Fallbrook Pub. Util. Dist.*, 110 F. Supp. 767, 771-72(S.D. Cal. 1953); *United States v. Jenkins*, 734 F.2d 1322, 1324, 1325 n.2. Whatever these cases may have to say about the history of Camp Pendleton, or the enclave status that may still exist on other parts of the base, they are inapposite to San Onofre.

TCA attempts to sidestep the plain fact of retrocession with a convoluted argument as to why it does not apply to the Toll Road. According to TCA, the retrocession of jurisdiction over San Onofre was "limited . . . to the terms of the lease" between the United States and the State of California. The lease, TCA claims, reserved to the Navy the exclusive right to grant easements for roads through the park, and therefore, the easement that the Navy

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[10] TCA App. 1-4(L) (PDF pp. 10-54).
[11] *Id.* (PDF pp. 14-21).
[12] TCA App. 1-4(L) (PDF p. 28).

might someday grant to TCA for the Toll Road "is not part of the leasehold subject to the retrocession." *id.* No part of this argument, however, stands up to scrutiny.

First, contrary to TCA's contention, the retrocession of concurrent jurisdiction over San Onofre is not limited to the "terms of the lease." The state accepted concurrent jurisdiction over San Onofre upon finding that doing so "would be in the best interest of the State in connection with the operation and administration of San Onofre Bluffs State Beach as part of the State park system."[13] Nothing in the retrocession documents suggests that the state's concurrent jurisdiction covered anything less than the entire leased area, or that the Navy's reserved rights in the lease in any way limited the geographic scope of the state's jurisdiction. Indeed, the only jurisdictional limitation tied to the lease is the *duration* of the retrocession.[14]

The Department of Parks and Recreation memoranda cited in TCA's Reply Brief is not to the contrary. Such memoranda have no legal effect under California law, under which only the resolution adopted by the State Lands Commission gives effect to retrocession. See Cal. Gov. Code § 113(c). But in any event, the Parks Department memoranda support a broad interpretation of the scope of the retrocession.[15] The State of California accepted concurrent legislative jurisdiction "in connection with the operation and administration" of San Onofre as part of the State park system.[16] And in any event, the issue under the CZMA is not whether the State has complete control over the land, but whether it has *any* control. Here, the State's broad concurrent jurisdiction over the entire park precludes any argument that the land is "solely" within federal control.

TCA's next assertion -- that the lease for San Onofre reserved an exclusive and absolute right in the United States to grant future easements – is also groundless. Part I, Article 3 of the lease expressly confers on the State of California the power to use, maintain, protect, and preserve San Onofre "in accordance with good management practices as a public park and not otherwise, such use to include any incidental uses that arise out of or are related to public recreation."[17] There is no limitation in the lease on the State's land use and management authority (other than a prohibition against discrimination in the operation of park facilities).[18] The Parks Department has exercised its land use authority liberally, including by enacting a comprehensive "general plan" for San Onofre and by developing a number of popular improvements, including the San Mateo Campground.[19]

The reservation of the federal government's right under the lease to grant future easements, moreover, is expressly limited by the State's right under the lease to operate, maintain, and improve the park. Specifically, any future easement may be granted only "after

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[13] TCA App. 1-4(L) (PDF p. 24).
[14] *See id.* (PDF pp. 23-24).
[15] *See* Supplemental Appendix to Appellant's Reply Brief ("TCA Supp. App.") 6-51 (seeking retrocession of "State's formal legislative jurisdiction . . . necessary for effective administration of this land as part of the State Park System"), 6-52 (identifying one example of the benefits of concurrent jurisdiction to the State).
[16] TCA App. 1-4(L) (PDF p. 24).
[17] TCA App. 76-133 (PDF p. 5).
[18] *Id.*
[19] *See generally* TCA App. 76-132.

consultation with Lessee as to location," and even then only if it is located "so as not to unreasonably interfere with the use of Lessee's improvements erected on the Leased Property."[20] The lease did not give the United States carte blanche to grant a future easement for a road in any location whatsoever. Rather, the lease gives the State a right to use the land for park purposes and to install incidental improvements, and limits the federal government's right to grant easements that would unreasonably interfere with these improvements. In other words, the lease allows the improvements erected in the park to take precedence over the reserved right to grant easements.

Even if an easement over retroceded property had was relevant to the question of exclusive federal control over the land, such an easement has not been granted through San Onofre and may never be. An enclave is a piece of property, acquired for specific purposes by the federal government, exclusive legislative jurisdiction over which has been ceded by consent of the state government. TCA cites no authority in support of its theory that a reserved right to grant an easement at some point in the future creates a "free-floating" federal enclave. Put simply, San Onofre is presently within the control of the State, and is therefore not excluded from the coastal zone under the CZMA.[21]

b. The Recent *Manchester Pacific* Decision Is Inapposite.

In a "Notice of Supplemental Authority,"[22] TCA cites an unpublished interlocutory District Court decision in *Manchester Pacific Gateway LLC v. California Coastal Commission*, 2008 U.S. Dist. LEXIS 34703, No. 07cv1099JM(RBB) (S.D. Cal. April 25, 2008) as supporting its argument that the path of the Toll Road is excluded from the coastal zone. That non-final and non-binding opinion is clearly distinguishable: the outcome in the *Manchester Pacific* ruling turned on the fact that, unlike the Toll Road, the challenged activity was a *federal* project.

The project at issue in *Manchester Pacific* involved the mere participation of private parties in a "federal project" undertaken for the "express purpose" of providing facilities for the Navy's use. *Id.* at *13-14. The federal project enlisted the assistance of private parties "to accomplish the federal objective to construct Navy administrative facilities," and did not "in any way undermine the Federal Government's exercise of sole discretion over the use of federal lands." *Id.* at *16-17. There was no retrocession to the State, no shared jurisdiction, no state park land. The only question is whether involvement of a private party in a federal project

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[20] *Id.* (PDF p. 10).

[21] Moreover, none of TCA's arguments relating to the park lease apply to the substantial portion of the project within the I-5 corridor, over which California also has accepted retrocession. TCA App. 1-4(L) (PDF pp. 28-54). TCA's statement that I-5 is "already developed as an interstate freeway" (TCA Reply at 4 n.12) is immaterial. The portion of the Toll Road within the I-5 corridor is not within exclusive federal control (indeed, it is within exclusive state control), and therefore it is not excluded from the coastal zone.

[22] TCA's "Notice of Authority" is actually a late-filed supplemental reply brief consisting of several pages of argument. TCA does not attempt to explain why it could not have submitted the Manchester Pacific decision, which was issued a week before TCA filed its Reply brief, at a proper time. Nor does TCA attempt to explain why it attached and filed an additional exhibit from 1976 with this so-called "Notice of Authority." For these reasons alone, TCA's belated attempt to submit an additional brief should be rejected, and the "Notice" should be stricken from the record.

eliminated the Navy's "sole discretion" over the land for purposes of the CZMA's definition of the coastal zone, and the court held it did not.[23]

The Toll Road, in contrast, is not a "federal project" at all. It is a *local* project undertaken by a *local* public agency on land within the concurrent jurisdiction of the State of California that is devoted to state park use. There is simply no way to describe the Toll Road as a federal project – indeed, if it was, the Navy rather than TCA would have been responsible for determining consistency in the first instance under a different provision of the CZMA. *Compare* 16 U.S.C. § 1456(c)(1)(A), (C) with 16 U.S.C. § 1456(c)(3)(A). Nor can the use of San Onofre be characterized as within the "sole discretion" of the Navy. *Manchester Pacific* is easily distinguishable.[24]

2. The Commission Has Authority – and Is Required -- to Review the Coastal Impacts of the Portion of the Toll Road Located Outside the Coastal Zone.

The Commission's jurisdictional responsibility is not limited to reviewing the impacts of the 2.2-mile portion of the Toll Road within the coastal zone. The law is absolutely clear that the Commission has the authority to consider the impacts of the portion of the Toll Road *outside* the coastal zone that will foreseeably affect resources or uses within the coastal zone. The CZMA defines the Commission's jurisdiction to include any "activity, *in or outside of the coastal zone*, affecting any land or water use or natural resource of the coastal zone . . . ." 16 U.S.C. § 1456(c)(3)(A) (emphasis added). The California Coastal Act, in turn, authorizes the Commission to "exercise any and all powers set forth" in the CZMA. Cal. Pub. Res. Code § 30330.

Federal courts have construed the term "affecting . . . the coastal zone" to include "indirect effects which may be caused by the activity and are later in time or farther removed in distance but are still reasonably foreseeable." *California ex rel. California Coastal Comm'n v. Norton*, 150 F.Supp.2d 1046, 1052 (N.D.Cal. 2001) (citation omitted). The Department of

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[23] In fact, the issue in the *Manchester Pacific* ruling was not whether CZMA consistency review was required – the Navy had undertaken such review in that case, which indicates the Navy at least believed the project was within the coastal zone. Rather, at issue was whether the private developer was required to obtain a coastal development permit under the California Coastal Act. *See* 2008 U.S. Dist. LEXIS 34703 at *5. And the court's ruling on this issue is in direct conflict with controlling law. See, e.g., *Granite Rock v. California Coastal Commission*, 480 U.S. 572 (1986) (Commission had authority to require a coastal development permit on federal lands); *Friends of the Earth v. United States Navy*, 841 F.2d 927, 936 (9th Cir. 1988) (rejecting argument that coastal agency's permitting authority was inapplicable on federal military lands). The Commission has filed a motion for reconsideration with the district court pointing out these obvious conflicts.

[24] Moreover, the unpublished ruling is in no way binding precedent, much less "controlling authority" as TCA claims. An unpublished district court decision is not even binding on other district courts. *See, e.g., Threadgill v. Armstrong World Industries*, 928 F.2d 1366, 1371 & n.7(3d Cir. 1991); *Starbuck v. City and County of San Francisco*, 556 F.2d 450, 457 n.13 (9th Cir. 1977). The 1976 letter from the Department of Justice is likewise non-binding. Indeed, the letter's suggestion that all federal land is excluded from the coastal zone is not only in direct conflict with the plain language of the statute, but, as the letter itself points out, is in conflict with NOAA's own interpretation of the statute. TCA Supp. App., Tab 57 at 2.

Commerce's CZMA implementing regulations mirror this language. *See* 15 C.F.R. § 930.11(g). Accordingly, federal activities "within or outside the coastal zone" that affect coastal-zone resources must be consistent with coastal laws pursuant to CZMA. *California ex rel. California Coastal Comm'n*, 150 F. Supp. 2d at 1052; *see also Millennium Pipeline Co., L.P. v. Gutierrez*, 424 F. Supp. 2d 168, 177-78 (D.D.C. 2006).

Thus, by statute, the Commission is given a broad mandate to protect the integrity of coastal resources, whether or not the action in question actually takes place in the coastal zone. Here, it is well documented that the Toll Road as a whole – which is located both within and outside the coastal zone boundary – will have numerous significant and unmitigable indirect impacts on resources and uses in the coastal zone. There is no question that the Commission was not only authorized, but also affirmatively required by law, to consider such impacts under the CZMA.

Despite the clarity of the statute and the uniformity of decisions interpreting it, TCA nonetheless insists that the Commission lacks this authority. In its principal brief, TCA relies on *Sierra Club v. California Coastal Commission*, 35 Cal. 4th 839 (2005). *See* TCA Br. at 15-17. But nothing in *Sierra Club* purports to define or limit the consistency review jurisdiction conferred on the Commission under the CZMA. The case addressed only the Commission's permit authority under California law, and is thus irrelevant here, as correctly stated in the Commission's brief. Respondent California Coastal Commission's Principal Brief on Appeal ("Comm'n Br.") at 12-13. TCA's further suggestion that the Coastal Act does not affirmatively confer on the Commission any authority to perform consistency review under the CZMA for any coastal zone impacts of projects outside the coastal zone is simply wrong. *See* TCA Br. at 16-17. The Act designates the Commission "as the state coastal zone planning and management agency for any and all purposes," including exercising "*any and all powers*" granted under the CZMA. Cal. Pub. Res. Code § 30330 (emphasis added).

TCA also argues that the Commission failed to comply with regulations requiring identification of areas outside the coastal zone that might trigger the need for a consistency determination, and that therefore the Commission may not consider the impacts on the coastal zone of the portions of the Toll Road outside the coastal zone. *See* TCA Br. at 13-15 (citing 15 C.F.R. § 930.53), TCA Reply at 4-6 (same). But TCA ignores the guidance that it sought and received from NOAA on this very matter, and fundamentally misconstrues the plain purpose of the regulation on which it relies.

TCA and the Army Corps of Engineers sought guidance from NOAA in 1992 regarding the application of 15 C.F.R. § 930.53 to a separate toll road project that the Commission also wished to review for consistency with the CZMA. In two separate letters, NOAA responded that the purpose of 15 C.F.R. § 930.53 was to provide "constructive notice" that a project outside the coastal zone might trigger consistency review.[25] These letters concluded that the Commission had properly substituted *actual* notice of its intent to review the

[25] *See* J. Burgess, Chief, Coastal Programs Division, NOAA, Letter to J. Gleason, U.S. Army Corps of Engineers (May 19, 1992) ("Burgess letter") at 2 (attached as Exhibit 4); W. S. Wilson, Assistant Administrator, NOAA, Letter to W. Woollett, Jr., TCA (Oct. 6, 1992) ("Wilson letter") at 2 (attached as Exhibit 5).

Toll Road proposal for the constructive notice that would have been provided by describing the geographic area.[26] Because the Commission had "adequately fulfilled the intent of the regulatory requirements of 15 C.F.R. § 930.53(b)," the Commission was entitled to review the toll road proposal for consistency with the CZMA.[27]

The Commission also sought guidance from NOAA in 2001 as to the application of 15 C.F.R. §§ 930.53 and 930.54 to a project, like the Toll Road, that is "partially located within the coastal zone and partly located outside the coastal zone."[28] NOAA clarified its regulations as follows:

> [F]or CZMA Federal Consistency purposes, an activity that is located in the coastal zone and continues, physically, across the coastal zone boundary, is an activity that is in the coastal zone. If the activity requires a federal approval that is listed, pursuant to section 930.53(a), in the State's Coastal Management Program (CMP), then the entire project is subject to the State's consistency review. The part of the activity that is located outside the coastal zone would not have to be located in a geographically described location, pursuant to section 930.53, in order for the State to review the activity. Thus, section 930.53(a)(2) is not applicable.[29]

The Kaiser letter further confirms that the purpose of the geographic location description requirement is to "notify applicants and federal agencies" that consistency review will be required.[30] Such notice "would be superfluous when the activity is located within the coastal zone and it would make no sense to subjectively divide the project into two parts merely because the coastal zone boundary bisects the project. It is the entire activity that will have coastal effects, not just the part on the coastal zone side of the boundary."[31]

The Toll Road is just such a project: it physically crosses the coastal zone boundary, and the portion of the road outside the boundary will have dramatic coastal effects. TCA's complaint – essentially that it did not receive the "superfluous" notice provided by a geographic location description, when its own project was located at least partly within the coastal zone – is preposterous.[32]

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[26] Burgess letter at 1-2; Wilson letter at 2.
[27] Wilson letter at 2.
[28] *See* M. Delaplaine, California Coastal Commission, Letter to D. Kaiser, NOAA (Jan. 18, 2001) at 1 ("Delaplaine letter) (attached as Exhibit 6).
[29] D. Kaiser, Federal Consistency Coordinator, NOAA, Letter to M. Delaplaine, California Coastal Commission (Jan. 26, 2001) at 1 ("Kaiser letter") (attached as Exhibit 7).
[30] *Id.*
[31] *Id.*
[32] Mr. Kaiser's conclusions are entirely consistent with NOAA's discussion of the 2000 amendments to 15 C.F.R. § 930.53, as published in the Federal Register. First, NOAA confirmed that the express purpose of 15 C.F.R. § 930.53 remains the same. "The geographic location requirement is a means of notifying applicants and Federal agencies of activities with reasonably foreseeable coastal effects and are, subject to consistency review [sic]." Dept. of Commerce, Nat'l Oceanic and Atmospheric Admin., *Coastal Zone Management Act Federal Consistency Regulations*, 65 Fed.Reg. 77,124, 77,145 (Dec. 8, 2000). Therefore, "[b]ecause a State's coastal zone boundary is a

Moreover, even though the Toll Road was located within the coastal zone, and no further notice was necessary, the Commission still took care to provide ample, *actual* notice that the Toll Road would be subject to consistency review, as shown by the comments submitted by the Commission on the 2004 draft Environmental Impact Report ("DEIR") for the Toll Road.[33] TCA's response to these comments directed readers to section 4.15 of the final Environmental Impact Report ("FEIR"), which expressly discusses the need for both consistency review and a coastal development permit.[34] TCA cannot seriously contend that it did not know consistency review would be required for this project.

TCA's suggestion that it was deprived of notice that the Toll Road would require consistency review is frivolous. TCA has known and acknowledged since 1992 that its project would be subject to CZMA consistency review, and there is no basis in fact or law for avoiding review of the *entire* project's impacts on the coastal zone, as the CZMA requires.

B. The Commission Properly Objected to the Toll Road Based on Insufficient Information.

Incredibly, TCA attempts to manufacture a procedural violation on the part of the Commission out of TCA's own failure to provide the Commission with sufficient information to fully evaluate the impacts of the Toll Road. The attempt fails.

First, TCA misreads NOAA's regulations governing the submission of information in support of a consistency certification. TCA Br. at 17-18. The Commission's brief correctly identifies TCA's errors and describes the authority supporting the Commission's insufficient information objection. Comm'n Br. at 13. In fact, NOAA itself rejected a version of TCA's argument when it amended 15 C.F.R. § 930.63 in 2000. *See* Dept. of Commerce, Nat'l Oceanic and Atmospheric Admin., *Coastal Zone Management Act Federal Consistency Regulations*, 65 Fed. Reg. 77,124, 77,147 (Dec. 8, 2000) (hereafter "*2000 Final Rule*") (rejecting argument that state should not be able to object on basis of insufficient information, where that information is in addition to that required under 15 C.F.R. § 930.58).

TCA argues in reply that the Commission's insufficient information objection was internally contradictory and thus procedurally defective. TCA Reply at 6-7. TCA once again misreads the relevant regulation, which allows a state to assert both inconsistency with coastal management policies and insufficient information as "alternative" grounds for an objection. *See*

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geographic location description, Federal lands located within the boundaries of a State's coastal zone are sufficiently described for federal license or permit activities occurring on those federal lands." *Id.*

[33] *See* TCA App. 30/31-56, comment letter S-3 (PDF pp. 547-54) (letter from M. Delaplaine, California Coastal Commission, to M. Cleary-Milan, TCA (July 30, 2004) at 3-4, enclosing similar letter from M. Delaplaine to N. Lucast, TCA (Sept. 25, 1996).)

[34] TCA App. 25-53 at 3-72 (PDF p. 154), referring to TCA App. 21/22-50 at 4.15-3 (PDF p. 379) (section 4.15, stating that "[a] CDP application for construction of the Preferred Alternative, including utility relocations, will be submitted to the CCC, and all requirements of the Federal Coastal Zone Management Act will be met."); see also TCA App. 25-53 at 3-65 (PDF p. 147) ("A federal consistency certification and state CDP will be processed for the Preferred Alternative by the TCA F/E Board of Directors.").

15 C.F.R. § 930.63(a). TCA reads "alternative" to mean "exclusive" – in other words, to mean its opposite – a counterintuitive and illogical reading for which TCA offers no support,[35] and which would conflict with the plain meaning of the word "alternative" as used in other legal contexts. *See, e.g.*, Fed. R. Civ. P. 8(a)(3), (d)(2) (permitting pleadings to seek "relief in the alternative" and to "set out 2 or more statements of a claim or defense alternatively"). If anything, 15 C.F.R. § 930.63 affirmatively authorized the Commission to do exactly what it did here.

TCA's assertion also lacks the force of logic. There is nothing inherently contradictory about finding, based on what is known about a project's impacts, that it is inconsistent with coastal policies, while at the same time objecting to the applicant's refusal to supply all information necessary for a complete evaluation. The express authorization of "alternative" objections set forth in 15 C.F.R. § 930.63(a) appears to contemplate this very situation.

C. The CZMA Does Not Authorize the Secretary to Override the Commission's Objection on Non-Statutory Grounds.

As discussed in the Commission's principal brief, Comm'n Br. at 13 n.5, there are only two statutory bases for overriding the state's objection on appeal: the project is consistent with the objectives of the CZMA or necessary for national security. The regulation requiring the Secretary to override an objection on jurisdictional or other procedural grounds has no foundation in the statute itself.

TCA's reply brief completely fails to respond to this argument. In circular fashion, TCA claims that the Secretary has statutory authority to override an objection on non-statutory grounds because the Secretary has adopted a regulation purporting to create this authority. *See* 15 C.F.R. § 930.129(c). The Commission's point, however, is that the CZMA itself – the sole *statutory* source of the Secretary's authority – does not authorize that regulation. Neither of the sections of the CZMA addressing appeals to the Secretary evince any intent to allow applicants to seek a remedy from the Secretary regarding perceived jurisdictional or procedural defects. *See* 16 U.S.C. §§ 1456(c)(3)(A) (prohibiting issuance of federal permits following state's objection unless Secretary finds that activity "is consistent with the objectives of this chapter or is otherwise necessary in the interest of national security"), 1465 (establishing deadlines for appeals process).

It is well settled that a regulation cannot confer a right of action that is not authorized by statute. *See Alexander v. Sandoval*, 532 U.S. 275 (2001). In *Alexander*, the Supreme Court found that a regulation adopted pursuant to a statute authorizing promulgation of regulations to "effectuate the provisions" of a federal anti-discrimination law could not create a private remedy for types of discrimination not addressed in the statute itself. *See id.* at 288-89. Here, the Secretary has been granted similar authority to promulgate "such rules and regulations

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[35] TCA's sole citation in support of this contention provides no support at all. The Secretary's decision in the *Millennium Pipeline* appeal merely distinguishes between the two types of objections, and does not hold that a state must choose between them. *See Millennium Pipeline*, 2003 NOAA LEXIS 17 at *9.

as may be necessary to carry out the provisions of this chapter." 16 U.S.C. § 1463. The grounds for an appeal of the Commission's objection are carefully defined and strictly limited. The regulations governing the appeal process must be consistent with those statutory grounds.

IV. TCA's Appeal Does Not Satisfy the Statutory and Regulatory Standards for an Override of the Commission's Objection.

A state's objection to a consistency certification under the CZMA may be overturned only if the Secretary finds "that the activity is consistent with the objectives of [the CZMA] or is otherwise necessary in the interest of national security." 16 U.S.C. § 1456(c)(3)(A). According to the Secretary's past decisions, the Secretary must "conduct a de novo inquiry of whether the activity is consistent with the objectives of the CZMA or necessary in the interest of national security." *Consistency Appeal of the Virginia Electric and Power Company*, 1994 NOAA LEXIS 31, at * 33 (May 19, 1994) ("*VEPCO*"); *see also Consistency Appeal of Chevron, U.S.A, Inc.*, 1990 NOAA LEXIS 47, at *18-19 (Oct. 29, 1990) ("*Chevron I*") at *19.

In this consistency appeal, TCA bears the burden of producing evidence, as well as the burden of persuading the Secretary that the statutory criteria for an override have been satisfied. *See Chevron I* at *18. TCA has not carried its burdens here.

A. <u>Ground</u> I: The Toll Road Is Inconsistent with the Objectives of the CZMA.

Under regulations adopted by NOAA, the Toll Road can be found "consistent with the objectives" of the CZMA only if it satisfies all of the following criteria:

(1) It furthers the national interest, as articulated in § 302 or § 303 of the Act, "in a significant or substantial manner."

(2) The national interest furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively.

(3) There is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

15 C.F.R. § 930.121. TCA's failure to meet any one of these criteria would require denial of the appeal. *See Millennium Pipeline* at *44-45. As shown below, TCA has satisfied *none* of them.

1. <u>Element 1</u>: The Toll Road Does Not Advance the National Interest in Any Significant or Substantial Manner.

The first factor for the Secretary to consider on appeal is whether "[t]he activity furthers the national interest as articulated in § 302 or § 303 of the [CZMA], in a significant or substantial manner." 15 C.F.R. § 930.121(a). The qualifying phrase "in a significant or substantial manner" was added in 2000, in an attempt to conform the regulations to Congress'

intent under the CZMA that states retain primary decision-making authority over local coastal projects. As stated by the agency,

> Congress acknowledged a national objective in the 'effective management, beneficial use, and development of the coastal zone' and specifically chose the States as the best vehicle to further this national interest . . . The Secretarial review function is not intended to upend the State management structure by replacing the State agency's decision with the Secretary's *for projects which are essentially local government land use decisions and which do not significantly or substantially further the national interest of the CZMA's objectives* . . . [Prior applications] of the regulations has created the appearance that the Secretary overlooked the intent of the Act to support the States' use of section 307 to require that federal license or permit activities be consistent with federally approved management programs. In other words, the activity must be more than related to one of the category of objectives . . . it must contribute to the *national achievement of those objectives in an important way or to a degree that has a value or impact on a national scale.*

2000 Final Rule, 65 Fed. Reg. at 77,149-50 (emphasis added).

NOAA specified three criteria for consideration in deciding whether this amended standard has been met: (1) The degree to which the activity furthers the national interest; (2) the nature or importance of the national interest furthered as articulated in the CZMA; and (3) the extent to which the proposed activity is coastal dependent. *Id.* at 77,150.

In light of this significant amendment, TCA's reliance on pre-2000 Secretarial decisions finding that the "national interest" factor "normally will be satisfied on appeal" is misplaced. *See* TCA Br. at 19-20 (citing *Consistency Appeal of Amoco Production Co.*, 1990 NOAA LEXIS 49 (July 20, 1990)). The plain language of this amendment, especially when read in light of NOAA's accompanying explanation, strongly indicates that this factor can no longer be taken for granted.

TCA acknowledges that the amendment was adopted "to reduce the likelihood that an override will be sought 'for projects which are essentially local government land use decisions,'" TCA Br. at 20 (quoting *2000 Final Rule*, 65 Fed. Reg. at 77, 150). Yet TCA seeks an override for exactly this type of project. TCA is a local government agency composed of local government officials from within Orange County. TCA itself has claimed that the Toll Road is needed to relieve traffic that will be caused by continued residential, industrial, and commercial development in "south Orange County," and has relied on local jurisdictions' general plans, in addition to regional population projections, in reaching this conclusion.[36] The stated purpose of the Toll Road is to alleviate traffic congestion along I-5 and the arterial network in "the study area" – a small portion of only one of California's many counties.[37] The Toll Road would also facilitate access to areas of Orange County currently planned for increased

[36] TCA App. 20/21-49 at 1-10, 1-15 (PDF pp. 40, 45).
[37] *See id.* at 1-16 (PDF p. 46.)

residential development.[38] The project is plainly designed to address the detrimental traffic impacts of past – and to facilitate future -- land use decisions made by the same local governments that comprise TCA.

The Toll Road's affect on the national interest is, if anything, detrimental. The project would devastate coastal access, harm water quality, increase greenhouse gas emissions, increase risk of wildfires, and result in a permanent encroachment on Camp Pendleton. The purported "benefits" of the project are incidental at best and serve only to partially offset the project's adverse impacts. Moreover, not one of these "benefits" is dependent upon construction of the Toll Road – they are merely add-ons that can be incorporated into any of the less damaging alternatives to the Toll Road. There is nothing about the Toll Road that significantly or substantially furthers the national interest as articulated in the CZMA.

a. Development of the Nation's Coastal Zone.

The Toll Road does not further the national interest in coastal zone development in any significant or substantial manner. TCA fails to produce any meaningful evidence of a significant or substantial contribution to development in the coastal zone. Rather, TCA relies on general citations to the purpose of the Toll Road – providing traffic relief in the southern portion of a single California county – without ever even attempting to demonstrate that this will lead to further development in Orange County's already highly developed coastal areas. TCA Br. at 20-21. Confronted with this lack of evidence, TCA in its Reply cites a string of irrelevant pages from the Coastal Element of the San Clemente General Plan, none of which even mention the Toll Road, much less show that it will lead to coastal development in San Clemente.[39] The last document cited by TCA, the General Plan's circulation element, mentions the Toll Road's possible existence, but says nothing about its contribution to development in the coastal zone.[40] TCA has the burden of producing evidence to show that the elements necessary for an override have been met. Here, TCA has chosen to rely solely on insinuations and assumptions, and thus has completely failed to meet its burden.

TCA's reliance on the *Islander East* and *VEPCO* decisions is misplaced. The Islander East pipeline project advanced national interests by enhancing the nation's energy infrastructure and providing natural gas to energy markets in two states and three large metropolitan areas (New York City, Long Island, and Connecticut). *Islander East* at 7. In addition, the Secretary noted that NOAA had specifically listed coastal-dependent energy facilities as a project that typically would meet the "significant and substantial" test. *Id.* at 5 (citing *2000 Final Rule*, 65 Fed. Reg. at 77,150). By contrast, the Toll Road is neither an interstate project nor an energy facility, and in fact is intended only to alleviate local and regional traffic congestion in south Orange County.

TCA also mischaracterizes the Secretary's decision in *VEPCO*. That case involved providing a safe source of drinking water for human consumption in a coastal area,

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[38] *See* TCA App. 20/21-49 at 1-6 to 1-7 (PDF pp. 37-38.)
[39] *See* TCA Reply Br. at 8; TCA Supp App. 4-20 at pp. 2-1, 3-24 to 3-27, 3-38 to 3-40, 4-7.
[40] *See* TCA Supp. App. 4-19 at 4-2.

which the court pointed out is "necessary in order to sustain the quality of life, as well as future economic growth and development." *See VEPCO*, 1994 NOAA LEXIS at *75-76. This is not, as TCA claims, a general statement that every project that might conceivably improve someone's quality of life is automatically in the national interest. TCA Reply at 7. In any event, TCA has failed to produce any actual evidence that the Toll Road – unlike the municipal water supply project considered in *VEPCO* – will actually advance the national interest in coastal development in a significant and substantial manner.

b. Coastal-Dependent Uses and Orderly Processes for Siting Major Transportation Facilities.

The Toll Road fails a threshold test with respect to this element in that it is not a coastal-dependent project. The CZMA identifies an interest in "coastal-dependent uses and orderly processes for siting major [transportation] facilities" (16 U.S.C. § 1452(2)(D)). The Secretary has held that in determining whether a project is "coastal-dependent," the main inquiry is "whether [the project's] location in or near the coastal zone is required to achieve the primary goal of the project in question." *Islander East* at 9. For example, because the Islander East pipeline needed to cross coastal waters to reach Long Island, the Secretary concluded that project was coastal-dependent. *Id.* The Toll Road, however, is not coastal-dependent because it can achieve its primary goal – the alleviation of traffic congestion in Southern California – without being located in or near the coastal zone.

Non-coastal alternatives for alleviating congestion in south Orange County exist. The U.S. Fish and Wildlife Service ("FWS") has urged its fellow federal agencies to explore alternative routes to the west of the Toll Road, including alternatives that do not encroach upon the coastal zone at all.[41] The U.S. Army Corps of Engineers has made very clear – contrary to false and misleading assertions advanced in TCA's principal brief – that the agency continues to consider the practicability of other alternatives, again including routes that do not impact the coastal zone.[42] Finally, as discussed in detail in Section IV.A.3 of this letter, reasonable alternatives that would be consistent with the State's coastal management program are available here. There is nothing about the Toll Road's purpose – alleviating traffic in south Orange County – that requires its location in the coastal zone. The Toll Road is not coastal-dependent, and an orderly process for its siting does not require that it be placed in the coastal zone.

TCA's reliance on the *Southern Pacific* decision is misplaced. The project at issue in *Southern Pacific* – much-needed repairs to a railroad bridge along a coastal rail line – was found to further the national interests of development and protection of coastal resources, as well as the siting of transportation facilities. *See Southern Pacific* at *19-20. The decision did not address whether the bridge was "coastal-dependent" (*see id.*), presumably because the bridge's fixed location within the coastal zone made this a non-issue.. Comm'n Br. at 16. Unlike the rehabilitation of an existing railroad bridge, the location of which necessarily must remain fixed, the Toll Road can attain its goal of reducing traffic congestion by means of an

[41] *See* TCA Supp. App. 6-50 at 173.
[42] *See* Col. T. Magness, Army Corps of Engineers, Letter to T. Street, NOAA (April 7, 2008) at 3 (attached as Exhibit 8).

alternative route outside of the coastal zone. *Id.* at 15-16. Nor does the *VEPCO* decision provide support for TCA's argument, as that case does not involve the siting of a major transportation facility. *See VEPCO* at *76 (finding water pipeline project furthered national interest in development of coastal zone).

TCA improperly ignores the fact that the Toll Road is not coastal-dependent, and thus fails to show that it advances the national interest in siting coastal-dependent transportation facilities.[43]

c. Coastal Recreational Access.

TCA wholly fails to support its claim that the Toll Road will further the national interest in coastal recreational access. The main support offered by TCA – a recitation of the purpose and need statement for the project – does not discuss recreational coastal access at all. *See* TCA Br. at 22 (citing TCA App. 20-49 at 1-18, 1-19). Another purported source of support consists of merely the same conclusory, unsubstantiated claim in another self-serving document prepared by TCA. *See id.* (citing TCA App. 8-20(B) at 132).

What is lacking is any *evidence* that the Toll Road will provide a meaningful public access benefit. Free public access routes already exist from inland areas to San Onofre (e.g., SR 91 to 55 or 57 to I-5), and TCA presents no evidence that the park, which gets over 2.4 million visitors per year, has public access problems due to traffic congestion. Indeed, the entire traffic analysis for the project is based on peak hour commuter travel. TCA has provided no data or analysis regarding the travel patterns of San Onofre or other park users or the extent to which they are affected by peak-hour travel conditions. There is simply no evidence in the record that the projected level of future congestion poses any barrier to public access to the park, or that any significant number of park users would consent to pay a toll when free routes are available.[44]

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[43] *See, e.g.,* TCA Reply at 8-9 (citing *Islander East* at 9). Even if Congress "broadly construed the CZMA to include both preservation and development objectives" (TCA Reply at 8 [citing unpublished District Court ruling]), the project still must be coastal-dependent. Moreover, even if projects that merely pass through the coastal zone "can" be found to further the national interest (TCA Reply at 8), it does not mean that they do; a project still must be shown to be coastal-dependent and meet all other requirements under the CZMA.

[44] Even with respect to peak hour travel, TCA's own application materials show that I-5 segments in the vicinity of San Onofre generally are at or below 50% of capacity during peak hours (i.e., at LOS B and C). TCA App. 12-29(C) at 2, Table A Segments of I-5 north of San Onofre are currently experiencing some deficiencies, but only in peak hour travel directions and locations that do not affect access to the park. TCA App. 20/21-49, Figs. 3.4-1, 3.4-2 (PDF pp. 279-80) With respect to projected future increases in traffic, weekday peak hour conditions on the segments of I-5 nearest San Onofre are projected in the FSEIR to remain "uncongested" even under the "No Action" alternative reflecting the most likely development scenario for the year 2025. *Id.* at 3-19 (PDF p. 235) (describing "Scenario 3" – buildout of circulation system plus development of 14,000 dwelling units at Rancho Mission Viejo – as most likely future scenario); Fig. 3.4-5 (PDF p. 289) (showing weekday peak hour conditions for "No Project" alternative). Outside the immediate vicinity, there is only one "deficient" mainline segment of I-5 (between Avenida Pico and El Camino Real) that could conceivably affect southbound visitors attempting to reach the park, and then only during peak AM and PM hours. *Id.* at Fig. 3.4-4 (PDF p. 288),

TCA claim that its eleventh-hour proposal to pay millions of dollars to the California State Parks Department furthers the national interest in coastal access is also meritless. This payment – which would not be earmarked for any specific project and could be spent on non-coastal facilities – is nothing more than partial (and inadequate) mitigation for the project's massive impacts on San Onofre. Mitigation measures are not "benefits" of a project and cannot be divorced from the impacts they purport to offset.

Moreover, as discussed in greater detail in Section IV.A.2.a.iv, below, the purported benefits of TCA's monetary offer to the coast are entirely illusory. TCA anticipates that the vast majority of the funds (70%) would go toward paying the federal government for a future San Onofre lease – despite the lack of any evidence the park will need the money to remain open, and that most of the park will be lost if the Toll Road is built. The improvements TCA has identified as possible uses of the remainder money were planned long before TCA made its offer – indeed, several are largely completed already. TCA has not identified a single meaningful opportunity to replace the coastal recreational resources that will be lost to the Toll Road.

TCA cannot point to any evidence that the Toll Road would benefit coastal access, much less outweigh the project's devastating impacts on access described below. The project advances no national interest in coastal access.

d. Quality of Coastal Waters.

TCA's assertion that the Toll Road would improve the quality of coastal waters is also baseless. As with the proposed parks mitigation payment, the proposed treatment of existing runoff from Interstate 5 is mitigation measure designed to offset the Toll Road's water quality impacts, and not a "benefit" of the project. Indeed, the quality of the affected coastal waters is not currently impaired, nor is it threatened by any proposed project -- *other than the Toll Road itself*. Creating a problem and then attempting to mitigate it does not advance the national interest.

But even as mitigation, the proposed measure falls short. As discussed in section IV.A.2.a.vi below, not only are the estimated roadway pollutant reductions overstated, they fail to account for the significant potential impacts from the untreated *off-site* runoff that would result from TCA's massive proposed cut and fill operations along the San Mateo Creek Watershed. The Regional Water Quality Control Board has repeatedly denied water quality certification for the project due to TCA's failure to demonstrate these impacts can be avoided.

The proposed retrofit of I-5, moreover, has no inherent connection to the Toll Road and can be undertaken with or without the Project. The fact that Caltrans chose not seek funding for this treatment in 2006 (TCA Br. at 24) does not mean that it could never seek such funding. Indeed, as explained below, state water quality officials have the legal authority to *require* Caltrans to address any violation of water quality standards. Moreover, the retrofit can (and would) be included in *any* alternative to the Toll Road. Indeed, the proposed AIP-R alternative (discussed below) would provide new treatment for *15 miles* of I-5 that is presently untreated – 7 times the

area TCA proposes for the Toll Road – all without the 6 miles of disturbance to the San Mateo watershed the Toll Road would cause.

Far from furthering the national interest in improving the quality of coastal waters in any "significant" or "substantial" way, the Toll Road would provide no water quality benefits whatsoever.

e. Clean Air Act Compliance.

As a preliminary matter, "assisting California in complying with federal clean air standards," while a laudable goal, is not a policy objective identified in sections 302 or 303 of the CZMA, and is therefore not a factor to be considered in the national interest element. 16 U.S.C. §§ 1452, 1453. Consequently, TCA's arguments on this point are irrelevant.

TCA's arguments also fail on their merits. TCA asserts that because the Toll Road is cited as one of the Transportation Control Measures ("TCMs") listed in the region's Air Quality Management Plan ("AQMP"), the Commission's objection "jeopardizes Southern California's compliance with the Clean Air Act" and "threatens funding for all transportation projects in Southern California." TCA Br. at 25. TCA is wrong.[45]

According to David P. Howekamp, the former director of air quality programs at U.S. EPA Region 9 and the individual in charge at the regional level of overseeing Air Quality Management Plan submissions for federal approval, TCA "has greatly overstated the importance of the [Toll Road] Project to air quality progress as well as the air quality implications of the California Coastal Commission's Objection to the Project."[46] According to Mr. Howekamp, "TCMs provide extremely small emission reductions and are not relied upon in the AQMP for substantial reductions."[47] Indeed, the more than 200 TCMs listed in the AQMP *collectively* provide only 0.05% and 1.5% of the reductions for NOx and ROG, respectively, that are needed to attain the ozone standard by the deadline.[48] The Toll Road is *only one* of the more than 200 TCMs listed in the AQMP. Thus, removal of the TCM component of the Toll Road from the AQMP would at most have an infinitesimally small impact on the region's ability to attain its air quality goals.

Moreover, even if removal of this TCM would perceptibly alter the region's progress toward air quality attainment, TCA's alarmist claims would still be unfounded. Federal law provides a readily available TCM substitution process to address a situation where, for

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[45] TCA misleadingly claims that the *Toll Road itself* "is a Transportation Control Measure" in the AQMP. TCA Br. at 24. This is, at best, an overstatement. While carpool (HOV) lanes may qualify as TCMs, new, mixed-flow vehicle lanes like those provided by the Toll Road do not. Rather, the only component of the Toll Road that qualifies as a TCM is TCA's agreement to use differential pricing in its toll structure to achieve an average vehicle occupancy equivalent to that which would have been achieved with HOV lanes (which were originally planned for this corridor, but are not part of the initial Toll Road design). *See* TCA App. 20/21-49 at 4.7-37 (PDF p. 629) (describing toll road corridor alternatives as "priced HOV alternative[s]").
[46] D. Howekamp, Letter to NOAA General Counsel (May 27, 2008) at 1 (attached as Exhibit 9).
[47] *Id.* at 3.
[48] *Id.* at 5.

whatever reason, a TCM becomes infeasible – in other words, exactly the situation presented here. Under the Clean Air Act, TCMs such as the Toll Road's differential pricing commitment may be replaced with an alternate transportation control measure that (1) has equivalent or greater emissions reductions, (2) is implemented in accordance on a schedule consistent with the State Implementation Plan; (3) has adequate funding, (4) is developed through a collaborative process; and (5) EPA and the California Air Resources Board concur. *See* 42 U.S.C. § 7506(c)(8)(A).

As Mr. Howekamp points out, "such substitutions have been routinely made with the concurrence of State and Federal air quality agencies" to account for changing circumstances in the South Coast Air Basin, including in Orange County.[49] Further,

> After SCAG has quantified the emissions benefits of the TCA project (which are likely to be quite small if not overwhelmed by induced demand from increased capacity), the representatives of all affected jurisdictions should begin the collaborative process to identify and adopt replacement measures. As in the case of prior substitutions, adequate time is available under Federal law for a thorough and thoughtful process to occur.[50]

Thus, the Commission's objection will not, as TCA claims, create a significant Clean Air Act compliance issue.

TCA's general claim that the Toll Road will provide a necessary air quality benefit is even more specious. As even TCA acknowledges, total Vehicle Miles Traveled (VMT) in the sub-region will *increase* over no-project conditions if the toll road is built.[51] Thus, while some incremental benefit in air quality from congestion relief may occur in the short term, eventually this marginal benefit will be overwhelmed by the increased travel demand induced by the increase in road capacity (supply) that the toll road would provide.

This same increase in VMT also undermines TCA's claims that the toll road will somehow reduce greenhouse gas ("GHG") emissions. Obviously, GHG emissions are a function of fuel consumption, and total VMT is a key determinant of the amount of fuel consumed.[52] Congestion reduction is also a factor, *but only to the extent it can be achieved without offsetting increases in VMT*. Once the potential for a long-term increase in VMT is taken into account, the TCA cannot demonstrate any GHG emissions benefit. To the contrary, the perpetuation of auto

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[49] *Id.* at 5. Indeed, TCA itself took advantage of this substitution process when it replaced the originally planned HOV lane TCM with its current differential pricing strategy.
[50] *Id.*
[51] *See* TCA App. 25-53 at 2-56 to 2-59 (PDF p. 76-79).
[52] See the California Air Resources Board's Draft Report from the Land Use Subgroup of the California Climate Action Team (LUSCAT) May 8, 2008 Report at p. 8 ["The effectiveness of efforts to provide transportation alternatives to the automobile and TDM can be measured in terms of reductions in vehicle miles traveled (VMT) or expected growth in VMT. VMT reductions correlate directly with reductions in GHG emissions."]. Indeed, the report notes that "VMT is roughly equivalent to GHG" (*Id* at p. 30.)
The Report is found on the web at http://www.climatechange.ca.gov/luscat/documents/2008-05-14_meeting/DRAFT_LUSCAT_Submission_to_CARB.pdf

dependency the Toll Road would cause will make the single largest source of GHG emissions (the private auto at 36%) even more difficult to address.[53]

For these reasons, there is simply no basis to conclude, as the TCA urges, that the Toll Road advances any national interest in air quality. If anything, the nation's interest in these areas would be better served if the Toll Road – a traffic "solution" conceived almost 30 years ago – were not built. Southern California communities and officials need to move forward toward finding transportation and air quality solutions more appropriate to this century.

f. National Security.

National security is dealt with by the CZMA as a separate ground for appeal and is not a policy identified in section 302 or 303 of the Act. 16 U.S.C. §§ 1452, 1453. Accordingly, the Secretary must disregard TCA's arguments regarding the purported "training and infrastructure improvements at Camp Pendleton" for purposes of the national interest element of Ground I.[54]

But even if TCA's national security arguments could be entertained here, they fail on numerous grounds. First, the so-called "important national security improvements" were never part of the project approved by TCA to begin with. They were not even mentioned – much less analyzed -- in the NEPA or CEQA documentation for the Toll Road. Nothing in the final EIR's description of the project or its purposes and objectives refers to these "improvements."[55] The final EIR's description of the changes made by TCA to the Toll Road in designating the alignment through Camp Pendleton as the "preferred alternative" make no mention of these "improvements."[56] The portion of the project description discussing Camp Pendleton similarly makes no reference to the improvements.[57] Put simply, TCA's 2006 approval of the Toll Road did not even contemplate – much less require TCA to construct – the purported national security improvements.

TCA complains bitterly about the portion of the Commission's brief that points out these obvious facts, TCA Reply at 13, but these complaints are meritless. TCA's only evidence on this point – a handful of emails discussing meetings with Camp Pendleton officials –

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[53] See LUSCAT Report at 13 ["The amount of miles traveled by California residents increased at a rate of over 3 percent a year between 1975 and 2004, outpacing population growth which grew at less than 2 percent annually over the same time period. This increase in VMT directly correlates to an increase in petroleum use and GHG production. Passenger vehicle (cars and light trucks) emissions of 136 million metric tons of CO2 equivalent (MMTCO2e) per year represented, in 2004, about 30 percent of the state's total GHG emissions. That makes passenger vehicles the biggest GHG emitters in California. It also results in the transportation sector as whole being the largest emitters of GHGs in the State – 38 percent of the 2004 inventory. On-road vehicles emit the vast majority of California's transportation related GHG emissions – 172 MMTCO2e or 30 percent of the state's approximately 475 MMTCO2e total. Other transportation sources—mostly trains, planes, and ships—emit just 2 percent of the total."]

[54] TCA apparently seeks to avoid the stringent standard for overriding an objection on national security grounds, discussed in Section IV.B below. In either case, TCA arguments are meritless.

[55] *See* TCA App. 20-48 at ES-20 to ES-23 (PDF pp. 35-38); TCA App. 20/21-49 at 1-15 to 1-17, 2-5 to 2-7, Figs. 2.2-5 and 2.2-6 (PDF pp. 45-47, 59-61, 146-47).

[56] TCA App. 20/21-49 at 2-95 to 2-97 (PDF pp. 149-51).

[57] TCA App. 20/21-49 at 2-19 (PDF p. 73).

is not contrary at all. Rather, it confirms that TCA has proposed adding some additional, unrelated improvements for Camp Pendleton only *after* approving a project that did not include those improvements.[58] TCA has not committed to constructing those improvements, and indeed cannot without additional CEQA compliance. The "improvements" are nothing more than a post hoc contrivance to paint a national security veneer of over a project that never had anything to do with national security.

Indeed, TCA's proposal to use its funds to construct facilities on a United States military reservation exceeds the scope of its limited powers under California law. The use of toll and fee revenues collected by TCA is strictly limited by TCA's enabling statute. Fees can be used only "for purposes of defraying the actual or estimated cost of constructing bridges over waterways, railways, freeways, and canyons, or constructing major thoroughfares," and tolls "only for paying for the costs of construction of the major thoroughfare for which the toll is charged and for the costs of collecting the tolls." Cal. Gov. Code § 66484.3(a) and (f).[59] TCA has expressly denied that any of its so-called "improvements" to Camp Pendleton are mitigation measures intended to offset the Toll Road's significant and unmitigable encroachment impacts. TCA Reply at 13. Thus, there is no legal basis for TCA's use of toll or fee revenues to pay for the construction of a new gate and two highway overcrossings for Camp Pendleton, absent reimbursement from the federal government. In other words, even if it wanted to, the Navy could not get a free ride from TCA for national security improvements.[60]

Far from providing a national security benefit, the Toll Road would if anything *undermine* national security. Tellingly, TCA omits from its briefs any mention of the analysis of impacts to Camp Pendleton included in its own EIR for the project, which concluded that such impacts would be *significant and unmitigable*. As discussed in section IV.B below, these impacts include an increased threat to base security, disruption of nighttime training activities, and the permanent loss of several hundred acres of land that could have been used to support the Marines' mission.

TCA also omits from its appendix years of correspondence with the Marine Corps in which Camp Pendleton officials expressed concerns about the Toll Road's negative encroachment impacts on the base.[61] As the Commandant of the Marines put it in one of the documents omitted by TCA: "Frankly, my preference is that the proposed toll road not be

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[58] *See* TCA App. 73-106.

[59] The one exception to this limitation on expenditure of toll proceeds – irrelevant here – allows the agency to lend money to another joint powers agency for the purpose of constructing major thoroughfares. Cal. Gov. Code § 66484.3(f).

[60] Contrary to TCA's assertion (Reply Br. at 14), the Commission's argument that the Navy was supposed to fund these improvements (Comm'n Br. at 47 n.24) is neither wrong nor an accusation of "malfeasance" on the part of the Navy. As discussed earlier, federal law conditions the Navy's ability grant the easement requested by TCA on, among other things, applying the monies received therefore to the construction of the improvements. *Id.* (citing Pub. Law No. 105-261, § 2851(c); 112 Stat. 2220).

[61] *See generally* Exhibit 2 (attached). This long correspondence reflects the Marines' continuing concerns about encroachment on Camp Pendleton – including both environmental and operational issues – as well as the Marines' imposition of strict conditions on consideration of an alternative located on the Base.

constructed on or near Camp Pendleton. . . . This construction is one more encroachment venture that *will hinder our ability to prepare for war*." [62]

For all of these reasons, TCA has not shown (and cannot show) that the Toll Road would provide a significant and substantial contribution to the national interest.

2. <u>Element 2</u>: The Toll Road's Adverse Effects on the Natural Resources of the Coastal Zone Vastly Outweigh its Negligible Contribution to the National Interest.

The second element of Ground I requires the Secretary to determine whether the national interest furthered by the Toll Road outweighs its adverse coastal effects, when those effects are considered separately or cumulatively. 15 C.F.R. § 930.121(b). In evaluating this element, the Secretary must (1) identify the Toll Road's adverse effects on the natural resources of the coastal zone; (2) assess the cumulative adverse effects of the Toll Road on those same resources in combination with other activities affecting the coastal zone; and (3) weigh those impacts against the Toll Road's contribution to the national interest. *See Mobil Exploration*, 1993 NOAA LEXIS 4 at *33-34.

The "national interests" to be balanced against adverse effects under this element, moreover, are limited to those recognized in or defined by the objectives or purposes of the CZMA. *Chevron I*, 1990 NOAA LEXIS 47 at *126-27. "In other words, while a proposed activity may further (or impede) a national interest beyond the scope of the national interests recognized in or defined by the objectives or purposes of the [CZMA], such a national interest may not be considered in the balancing." *Id.* at *127 (quoting *Decision in the Consistency Appeal of the Korea Drilling Company, LTD. from an Objection by the California Coastal Commission*, 1989 NOAA LEXIS 34 at *37).

The environmental documentation prepared by TCA, the exhaustive analysis of the Toll Road project by the Commission, and the independent expert analyses in the record all demonstrate that the project will cause extraordinarily severe adverse impacts on coastal resources. Specifically, the Toll Road will disrupt and degrade a unique assemblage of coastal areas providing habitat for numerous threatened and endangered species, fill wetlands and degrade water quality, and destroy a significant portion of a State Park, among many other impacts. The likely impacts of the Toll Road on listed species, unique ecosystems, protected lands, and wetlands appear to exceed those of any project ever considered by the Commission, or in a Secretarial appeal. These adverse effects dwarf the Toll Road's negligible contribution to the national interest.

[62] Gen. J.L. Jones, Commandant, U.S. Marine Corps, Letter to Christine Todd Whitman, Environmental Protection Agency (Feb. 9, 2002) at 2 (emphasis added) (attached as Exhibit 1).

a. The Toll Road Will Severely Impact Coastal Resources.

i. The Toll Road Will Destroy and Degrade Habitat for Threatened and Endangered Species.

TCA attempts to downplay the Toll Road's impacts on threatened and endangered species and their habitat, asserting that federal wildlife agencies have determined that "the Project, with mitigation, will not jeopardize any species' survival and will not adversely modify any critical habitat." TCA Br. at 30-31; TCA Reply at 16. The assertion is doubly misleading.

First, as discussed in greater detail below, TCA distorts the significance of the Biological Opinion ("BO") recently released by the U.S. Fish and Wildlife Service ("FWS"). The BO found only that the Toll Road would not "jeopardize" any species – in other words, that the project would not actually drive any species to extinction. This does not mean that the Toll Road will not have severe, adverse impacts on endangered species within the coastal zone. *See, e.g.*, *Nat. Res. Def. Council v. Winter*, 518 F.3d 658, 691-92 (9th Cir. 2008) (rejecting argument that "no jeopardy" finding in biological opinion supported claim that project had no significant environmental impacts, and noting that "[a]n agency action can have 'significant effects' on the environment short of threatened extinction."). Indeed, the BO expressly acknowledges that the Toll Road will adversely affect endangered and threatened species. Moreover, the BO's finding that the Toll Road will not drive any of those species to extinction is itself questionable.

Second, TCA asserts that the Toll Road will not adversely affect any "critical habitat," implying that there is no important habitat within the project area. This statement is also misleading. As biological matter, the project is within and would destroy critical habitat for a startling number of endangered and threatened species. And until recent changes to the law took effect, that habitat was designated "critical habitat" for those species as a legal matter under the federal Endangered Species Act ("ESA"). What has changed is not the importance of the habitat, but the legal definition of "critical habitat" as it pertains to military bases. Where an Integrated Natural Resources Management Plan ("INRMP") has been prepared for a military base, the INRMP supersedes previous designations of critical habitat under the ESA. *See* 16 U.S.C. § 1633(a)(3)(B)(i). The absence of "critical habitat" on Camp Pendleton is solely the result of this change in the law. The habitat impacted by the Toll Road remains "critical" to the survival and recovery of the threatened and endangered species on the property, and TCA's attempt to suggest otherwise is dishonest.

The record conclusively demonstrates that the actual, real-world impacts of the Toll Road on threatened and endangered species and their habitat – the impacts that matter for purposes of the CZMA – will be tremendous. The area affected by the Toll Road contains a rare, largely intact coastal assemblage of riparian habitat, wetlands, marsh vegetation, estuarine environs, coastal sage scrub, and other upland habitat areas. Coastal sage scrub provides essential habitat for the threatened California gnatcatcher, provides potential recovery habitat for the critically endangered Pacific pocket mouse, and is used for upland foraging, dispersal and

wintering habitat by the endangered arroyo toad.[63] Riparian and wetland areas are also vital for the toad. The southernmost known population of the endangered steelhead trout inhabits San Mateo Creek and its estuary, and the endangered tidewater goby makes its home in the San Mateo lagoon.

This particular habitat complex is especially biologically valuable and unique because coastal wetland-upland mosaics, like the area along San Mateo Creek, are highly depleted in Southern California. It lies at the mouth of the most pristine – and the only undammed – major coastal watershed in California south of Ventura. According to an analysis by the Conservation Biology Institute of watersheds between Los Angeles and the Mexican border, the San Mateo Creek and San Onofre Creek watersheds have the highest ecological integrity,[64] as measured by the amount of land cover changes from development and roads, of any coastal watersheds.[65] Thus, these two watersheds have the highest level of natural watershed functions in the region. A map of critical habitat previously designated by the United States Fish and Wildlife Service for endangered and threatened species shows an amazing confluence of these designations in and around the coastal zone at lower San Mateo Creek, making it a true "hotspot" of biological diversity.[66] The Commission correctly and unequivocally concluded that these features warranted designation as "environmentally sensitive habitat areas" ("ESHA"), which are entitled to the strongest possible protection under the California Coastal Act.[67]

The Secretary has recognized the importance of such rare and valuable habitat in balancing the national interest against adverse environmental impacts. For example, in *Consistency Appeal of Union Exploration Partners*, 1993 NOAA LEXIS 3 (Jan. 7, 1993), the Secretary rejected an appeal involving proposed offshore oil and gas leasing on balancing grounds, finding risk to an "extremely unique and valuable" portion of the Florida coast. Similarly, in *Consistency Appeal of Mobil Oil and Exploration*, 1993 NOAA LEXIS 4 (Jan. 7, 1993), also involving offshore oil and gas, the Secretary rejected the appeal on balancing grounds, based on potential impacts to the Florida keys Marine Sanctuary, and its "spectacular, unique and nationally significant marine environments, including seagrass meadows, mangrove islands, and extensive living coral reefs." Here, the Commission's designation of the affected habitat as ESHA demonstrates its similar uniqueness and importance. The Toll Road will directly occupy or significantly degrade more than 50 acres of ESHA within the coastal zone, and it is reasonably foreseeable that Toll Road construction and operation upstream from and adjacent to the coastal zone will further degrade this crucial habitat.

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[63] *See* W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, August 17, 2007 at 2-3 (attached as Exhibit 10).
[64] Ecological integrity refers to the degree to which the natural characteristics and functions of a watershed are intact or unmodified by humans.
[65] Figure 9, Ecological integrity of watershed basins in the region, *Conservation Significance of Rancho Guejito*, Conservation Biology Institute, 2005, http://www.consbio.org/cbi/projects/show.php?page=ranchoguejito/guejito-pdf.htm (last visited January 16, 2008).
[66] TCA App. 1-4(O) (PDF p.9).
[67] TCA App. 1-4 at 2-3 (PDF pp. 2-3); *see* Cal. Pub. Res. Code § 30107.5, *Sierra Club v. Cal. Coastal Comm'n*, 12 Cal. App. 4th 602, 613-15, 617 (1993).

Specifically, the Project would occupy and significantly disrupt the coastal-zone habitat of several species key to the biological diversity of the California coast, and would even push one critically endangered species – the Pacific pocket mouse – to the verge of extinction. These species include, but are not limited to, the following:

Coastal California Gnatcatcher. Coastal sage scrub is breeding habitat for the coastal California gnatcatcher, a threatened species under the federal Endangered Species Act. TCA has conceded that the Toll Road will impact at least 49.75 acres of coastal sage scrub ESHA in the coastal zone, including three California gnatcatcher use areas of undefined acreage.[68] A leading ornithologist with gnatcatcher expertise recently visited the site identified *at least 27 acres* of the directly impacted sage scrub is "high quality" and suitable for nesting, and observed and photographed gnatcatchers in areas where TCA's experts had suggested they would not be.[69]

The permanent loss of high-quality habitat immediately adjacent to the coastal zone will also foreseeably affect the value of any remaining gnatcatcher habitat within the coastal zone.

The primary mitigation TCA offers to offset the loss of this habitat is the utilization of coastal sage scrub "credits" in the agency's Chiquita Canyon Conservation Bank, a 327-acre proposed restoration site located in a conservation area far inland of the coastal zone.[70] But this site is supposed to provide mitigation for the *385 acres of sage scrub impacted by the entire 16-mile Toll Road project*.[71] TCA provides no explanation as to how it will compensate for this *net loss* of habitat, much less how such a net loss could possibly make up for the ESHA destroyed by the project.

Moreover, Chiquita Canyon's inland location cannot replace the unique values to the gnatcatcher which derive from a maritime location. These values include higher reproductive rates, lower winter mortality, and greater resistance of the coastal sage scrub to "type conversion" to weedy species as a result of drought, fire, and exotic species invasions.[72] Thus, even if habitat preservation and restoration occurred inland, it would not compensate for the elimination of distinctive *coastal* resources nor change the fact that a major disruption of this coastal sage scrub habitat had occurred.[73]

TCA's last-minute offer to fund restoration of 150 acres of coastal sage scrub habitat at Crystal Cove State Park is similarly ineffective. Most of the coastal sage scrub restoration that is biologically appropriate for this state park – and all that located in a maritime location – has already been completed. The remainder – only tens of acres –

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[68] TCA App. 13-31(B) at 59 (PDF p. 62).
[69] R. Hamilton, *Letter to California Coastal Commission*, January 16, 2008 at 6-7.
[70] *Id.* at 60.
[71] *See* TCA App. 21/22-50 at 4.11-96, Table 4.11-4A (PDF p. 264).
[72] W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, August 17, 2007 at 3.
[73] *Id.*.

will occur irrespective of TCA's offer.[74] This restoration would also be in a more inland location, in the El Moro Valley, about a mile from the ocean.[75]

Neither the Crystal Cove site nor the Chiquita Canyon site can reproduce the rich mosaic of coastal estuary, marsh, lush riparian woodland, sandy soils, and associated uplands that makes San Onofre so ecologically unique. Neither site has the watershed integrity of San Onofre. Indeed, Crystal Cove contains only narrow riparian strips and is surrounded by dense development. Piecemeal actions directed at only one component of a complex ecosystem will never restore the values lost.[76] The Toll Road's impacts on coastal sage scrub have not been, and cannot be, mitigated at these other locations.

Pacific Pocket Mouse. TCA's analysis of potential impacts on the Pacific pocket mouse ("PPM") is deeply flawed. This species is listed as "endangered" under the ESA and as "critically endangered" – the highest threat rating short of extinct in the wild – on the International Union for the Conservation of Nature's "Red List."[77] A quintessential coastal species, its habitat is restricted to sandy soils near the Pacific Ocean. It was once thought extinct but was rediscovered in 1993. It now has documented populations at only three limited locations along the coastline, two of which are on Camp Pendleton.[78] One of these sites – San Mateo Creek – supports two small and precarious populations, one north of the creek adjacent to the coastal zone, and the other south of the creek.

The Toll Road would have a devastating effect on the Pacific pocket mouse, and, according to one of the world's leading experts on the mouse, would substantially increase its risk of actual extinction.[79] This is because the health of *each* remaining population is of critical importance. According to the Recovery Plan for the PPM prepared by the United States Fish and Wildlife Service:

- "Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies' survival. All extant populations are essential. These populations should be protected and secured from significant potential impacts."[80]

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[74] D. Pryor, District Ecologist, California Department of Parks and Recreation (pers. comm. Jan. 7, 2008).
[75] TCA App. 1-4(B) at 2-3 (PDF pp. 8-9).
[76] *Id.*
[77] USFWS Threatened and Endangered Species System, http://ecos.fws.gov/tess_public/SpeciesReport.do?kingdom=V&listingType=L (last visited May 26, 2008) ("USFWS Endangered Species List") and http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=A0BY (last visited January16, 2008) ("Species Profile"); 2007 IUCN Red List of Threatened Species, http://www.iucnredlist.org.
[78] TCA App. 31/32-57 at 3 (PDF p. 7) (Wayne Spencer, Ph.D. & Robert Hamilton, *Review of Biological Resources Analysis in SOCTIIP Draft Environmental Impact Statement/ Supplemental Environmental Impact Report*, prepared for Shute, Mihaly & Weinberger (August 2004)).
[79] W.D. Spencer, Ph.D., *Review of Impacts to the Endangered Pacific Pocket Mouse by Eastern Alignments of the Proposed Southern Orange County Transportation Improvement Project*, Letter to US Fish and Wildlife Service, August 11, 2005 (hereafter "*Spencer 2005 Letter*") at 9 (attached as Exhibit 11).
[80] P. Brylski. PhD, et al., *Pacific Pocket Mouse Recovery Plan* (USFWS 1998) at 37 ("*PPM Recovery Plan*") (attached as Exhibit 12).

- "[F]urther losses of occupied *or potential* habitat would seriously reduce the probability of the persistence of the subspecies."[81]

- "Population persistence and expansion should be maintained by precluding actions which result in physical barriers to movement, habitat fragmentation, or an increase in edge effects."[82]

Critical to the biology of the Pacific pocket mouse is the ability to expand its numbers in good years, as this is vital to ensuring *bare survival* in bad years. Yet flying in the face of all scientific recommendations, the Toll Road would trap the San Mateo-North population in a highly constrained area between urban San Clemente and the highway. It would physically *eliminate* some currently occupied habitat, as well as a large amount of the *suitable* habitat needed for population expansion – both termed "essential" by the Recovery Plan. In addition to the direct taking, virtually all the rest of the expansion habitat would be degraded by fragmentation, loss of connectivity, and edge effects such as noise and light pollution.[83] *A significant portion of this essential expansion habitat – which qualifies as ESHA due to its special and valuable role in the ecosystem – lies within the coastal zone.*[84]

This absolute reduction in available habitat, and the resultant inability of the population to adapt to changing circumstances, severely increases the risk of extirpation of the San Mateo-North population. The number of individuals captured in different years at San Mateo-North has ranged from just 4 to 37, showing how susceptible this fluctuating population is to extirpation. In addition, the Toll Road would irrevocably sever the historic connectivity between the San Mateo-North and the San Mateo-South populations. These populations are now primarily separated by two-lane Cristianitos Road and old agricultural fields, which would be difficult, but not impossible, to cross.[85] The Toll Road, however, would place an 18-inch barrier curb along the western disturbance limit of the road, permanently isolating these populations from one another.[86] It would block mice from these different groups from interbreeding and reduce the propagation of genetic diversity essential to the species' survival.[87]

TCA claims that an undercrossing will mitigate this impact, but such measures are completely experimental with respect to small mammals such as mice and there is no evidence that it would result in any mitigation of impacts to this species.[88] TCA has acknowledged elsewhere that while larger mammal species are more capable of finding and using undercrossings, smaller wildlife species may simply attempt to cross deadly

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[81] *Id.* at 34 (emphasis added).
[82] *Id.* at 21.
[83] *Spencer 2005 Letter* at 8, Attachment A.
[84] *Id*. at Attachment A.
[85] *See id.* at 8-9.
[86] TCA App. 8-20(C) at 7-8 (PDF pp. 15-16).
[87] *Spencer 2005 Letter* at 8-9.
[88] *Id.* at 9.

road alignments directly.[89] The experimental undercrossings proposed by TCA would require these tiny creatures to find their way through culverts ranging from 95 to 525 feet in length.[90] One proposed undercrossing also seemingly leads to a detention basin for polluted runoff.[91] The FWS agreed in its BO for the Toll Road project that the undercrossing would not provide any effective mitigation.[92] In addition, the Toll Road would block the PPM from accessing the former agricultural fields in Camp Pendleton, which are partially within the coastal zone and, if restored, would greatly enhance connectivity between populations.

The BO for the Toll Road suggests that "management measures" proposed by TCA could avoid driving the species to extinction. However, as explained below, the conclusion is more than questionable, and ignores the permanent loss of crucial expansion habitat for the species. Small, precarious populations like that of San Mateo-North are vulnerable under best of circumstances. This is why, referring to San Mateo Creek, the Recovery Plan states, "All further actions in this area should improve ecosystem function and habitat linkage/connectivity."[93] To the contrary, the loss of *essential* habitat – which cannot be compensated for by mere management measures – plus the addition of edge effects and fragmentation, could jeopardize the very existence of this on-the-brink species.[94]

Finally, TCA's recent proposal to restore sage scrub habitat at Crystal Cove State Park will do nothing for the Pacific pocket mouse. The pocket mouse is not present at Crystal Cove, and in any event, the coastal sage scrub habitat identified for restoration at Crystal Cove lacks the sandy soils required by the pocket mouse.[95] Restoration of this site could never qualify as mitigation.

Arroyo Toad. TCA fails to account for impacts to the southwestern arroyo toad, another severely endangered species. San Mateo Creek is home to one of the most important remaining populations of the arroyo toad, which breeds in gravel terraces and uses adjacent riparian habitat and uplands for aestivation and foraging. On Camp Pendleton, the species has been documented to range at least 1.2 kilometers from the streamcourse as it forages for food.[96]

The Toll Road would destroy and disrupt significant arroyo toad habitat within the coastal zone. Indeed, according to an arroyo toad expert with extensive field experience in this very area, "Occupied and known arroyo toad habitat would be directly and significantly disrupted within the coastal zone of lower San Mateo Creek. Arroyo toads

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[89] TCA App. 25-53 at 3-344 (PDF p. 426).
[90] TCA App. 25-53 at 8 (PDF p. 16).
[91] TCA App. 14-31(E), Exhibit 3A (PDF p. 31).
[92] TCA Supp. App. 6-50 at 159.
[93] *PPM Recovery Plan* at 52.
[94] *Spencer 2005 Letter* at 9.
[95] *See* TCA App. 1-4(B) at 2 (PDF p. 8).
[96] TCA App. 1-4(H) at 2 (PDF p. 6) (R.E. Lovich, *Letter to California Coastal Commission*, August 16, 2007 ("*Lovich 2007 Letter*").

are well known as inhabiting the lower portions of San Mateo Creek, even west of I-5 (Griffin and Case 2001, Holland and Goodman 1998)."[97] This includes significant areas of coastal sage scrub in the uplands along the creek that would be lost.[98]

The Toll Road would degrade and physically occupy coastal sage scrub uplands in the coastal zone of lower San Mateo Creek. The Toll Road also would block arroyo toad access to habitat areas on the other side of the highway, causing further significant disruption to its biological value.[99] These effects continue upstream, where access to vital uplands would be blocked along important drainages in the San Mateo Creek and San Juan Creek watersheds. At the same time, the Toll Road would interfere with the necessary interbreeding between populations.[100] The end result would be a loss in population viability for arroyo toads both within and without the coastal zone.[101]

In general, the arroyo toad is highly sensitive to habitat fragmentation, as occurs with highways. It has reliably disappeared from watersheds throughout Southern California where habitat contiguity has been lost. Only in the most intact watersheds – like San Mateo Creek and its tributaries – does it still survive.[102] "The tollroad in this location would degrade and fragment this extraordinary relict of a once-larger functional ecosystem in Southern California."[103]

TCA's proposed mitigation measures for the arroyo toad are woefully inadequate. TCA's measures are largely limited to temporary construction impacts and fail to address more serious long-term threats to the species. Mitigation measures referenced in the consistency application include construction management plans, mapping of arroyo toad habitat areas, fencing, surveys, relocation, and recreation of habitat after construction.[104] None of these measures, however, addresses habitat fragmentation and loss of population viability. They are "insufficient."[105] Nor does the newly proposed Crystal Cove restoration site contain the gravel terraces and intact hydrologic regimes required by the arroyo toad.[106] This restoration proposal cannot contribute to this species' viability.

Southern Steelhead and Tidewater Goby. Both of these species are federally endangered,[107] and their habitats would be degraded by the Toll Road. Research on historic population sizes suggests that San Mateo Creek may have once been one of the

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[97] *Id.* at 2.
[98] R.E. Lovich, *Occupied Arroyo Toad Habitat in the Coastal Zone* (Sept. 2007) (based on TCA App. 21/22-50, Fig. 4.11-1j, (PDF p. 233)) (attached as Exhibit 13).
[99] *See* TCA App. 1-4(H) (*Lovich 2007 Letter*) at 4 (PDF p. 8).
[100] *Id*. at 3-4.
[101] *Id*.at 5.
[102] *Id.* at 4-5.
[103] *Id.* at 4.
[104] *See* TCA App. 13-31(B) at 64 (PDF p. 67); TCA App. 21/22-50 at 4.10-17 to 4.10-20 (PDF pp. 126-29), 4.12-32 to 4.12-34 (PDF pp. 329-32).
[105] TCA App. 1-4(H) (*Lovich 2007 Letter*) at 3 (PDF p. 7).
[106] *See* TCA App. 1-4(B) at 2 (PDF p. 8).
[107] *See* 71 Fed. Reg. 833 (January 5, 2006) (listing southern California coast steelhead as "endangered"); 59 Fed. Reg. 5494 (February 2, 1994) (listing tidewater goby as "endangered").

most populated steelhead streams in the region.[108] TCA has argued that the probability of impacts on southern steelhead is extremely low because they are predicted to occur in low numbers.[109] But the San Mateo watershed is the only watershed south of Malibu Creek to support a breeding population of southern steelhead and is considered critical to recovery of this listed species.[110]

Young steelhead (fry) are especially sensitive to fine sediments and turbidity,[111] both of which may be multiplied many times over by road construction projects.[112] As discussed in section IV.A.2.a.vi below, the massive cut and fill needed for the Toll Road will significantly disturb 20 natural subwatersheds of San Mateo Creek. Sediments and turbidity may be multiplied many times over by road construction projects.[113] The natural watersheds through which the Toll Road would run are presently in equilibrium, but are fragile and "prone to instability and rapid degradation with relatively minor changes in runoff patterns caused by changes in land use. Introducing a new highway through these undeveloped watersheds is likely to result in drastic impacts to both sediment production and channel habitat structure."[114] Approximately 40% of the upstream portion of each of the eight subwatersheds near the mouth of the creek will be disturbed on average, which will lead to destabilization and erosion of channels.[115] The combination of disturbance of watersheds and combined with the concentration of flow in culverts is likely to cause major erosion of fine sediments and destabilization of stream channels.

The proposed BMPs (energy dissipation at culvert outlets and revegetation along cut and fill slopes) are inadequate to address impacts associated with flow concentration, increased runoff, and the potential for significant soil erosion.[116] As a result, siltation of the creek system will occur, degrading water quality and habitat conditions.[117]

Tidewater gobies are found only in the coastal wetlands and estuaries of California, and are now restricted to a fraction of their former range.[118] TCA concedes that the San

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[108] Wayne Spencer, et al., *On the Global and Regional Ecological Significance of Southern Orange County: Conservation Priorities for a Biodiversity Hotspot*, Prepared for Endangered Habitats League (2001) ("*Spencer Conservation Priorities*") at 26 (attached as Exhibit 14).
[109] TCA App. 13-31(B) at 63 (PDF p. 66).
[110] *Spencer Conservation Priorities* at 36.
[111] K.B. Suttle, et al., *How Fine Sediment in Riverbeds Impairs Growth and Survival of Juvenile Salmonids, Ecological Applications*, Vol. 14 No 4, August, 2004 at 969-974 (attached as Exhibit 15).
[112] A.P. Wheeler, et al., *Impacts of New Highways and Subsequent Landscape Urbanization on Stream Habitat and Biota*, 13 Reviews in Fisheries Science 141, 144-45 (2005) (attached as Exhibit 16).
[113] A.P. Wheeler, et al., *Impacts of New Highways and Subsequent Landscape Urbanization on Stream Habitat and Biota*, 13 Reviews in Fisheries Science 141, 144-45 (2005).
[114] PWA Letter dated January 22, 2008 at 2.
[115] Philip Williams & Associates, Ltd., *Letter to Surfrider Foundation*, August 31, 2007 ("*PWA 2007 Analysis*") at 2-3 (attached as Exhibit 17).
[116] M. Lindley, Philip Williams & Associates, Ltd. (pers. comm. January 17, 2008).
[117] *PWA 2007 Analysis* at 3.
[118] Ventura Fish & Wildlife Office: Tidewater Goby, http://www.fws.gov/ventura/sppinfo/profiles/details_fish.cfm?speciesid=122 (last visited May 26, 2008).

Mateo Creek Lagoon is habitat for the tidewater goby, but insists that the species will not be affected by Foothill-South, either during construction or afterwards. This is inaccurate. The subwatersheds and tributaries to San Mateo Creek, including its estuary and lagoon, play a special role in the aquatic ecosystem on which both steelhead and tidewater goby depend for their survival and recovery. As described above, due to extensive degradation of subwatersheds by the Toll Road and inadequate mitigation measures, erosion and fine sediment delivery to the lagoon at the creek mouth has the potential to change its ecology over time.[119] This would be highly detrimental to the tidewater goby, which is threatened by both siltation and urban development leading to loss of coastal saltmarsh habitat.[120]

TCA relies very heavily on a short letter from the National Marine Fisheries Service stating the agency's opinion that the Toll Road is not likely to adversely affect either the steelhead or the goby. *See* TCA Br. at 30-31. That letter, written in May 2007, briefly recites TCA's proposed BMPs and water quality mitigation measures. However, the NMFS letter did not consider the critique of TCA's Runoff Management Plan ("RMP") conducted by independent experts and submitted to the Commission, including noted hydrological engineers Philip Williams & Associates ("PWA").[121] PWA showed that the steep cut and fill slopes necessary to route the Toll Road through the San Mateo Creek watershed – slopes up to 20 stories high – were likely to fail, despite the proposed revegetation efforts. Because there are no facilities to catch the eroded earth before it reaches San Mateo Creek, siltation would degrade water quality in a stream considered critical to the species' recovery. Young steelhead (fry) are especially sensitive to fine sediments and turbidity.[122] The Regional Water Quality Control Board has also found that the RMP submitted by TCA "was not adequate to demonstrate that the project would not cause degradation of receiving waters."[123] In short, NMFS appears to have reached its conclusion based on incomplete and inadequate information, and without considering important information, now before the Secretary, concerning the tremendous risk that the Toll Road will destabilize lower San Mateo Creek and thus risk harm to both the steelhead and the goby.

The record thus shows that the Toll Road's impacts on these species and their unique and irreplaceable coastal habitats will be immense even after mitigation.

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[119] *PWA 2007 Analysis* at 3.
[120] Ventura Fish & Wildlife Office: Tidewater Goby, http://www.fws.gov/ventura/sppinfo/profiles/details_fish.cfm?speciesid=122 (last visited May 26, 2008).
[121] See, e.g., TCA App. 1-4(E) (PDF pp. 1-5), 1-4(F) (PDF pp. 6-13).
[122] K.B. Suttle, et al., *How Fine Sediment in Riverbeds Impairs Growth and Survival of Juvenile Salmonids*, 14 Ecological Applications 4 (August, 2004) at 969-974 (attached as Exhibit 14).
[123] J.H. Robertus, Regional Water Quality Control Board, Letter to R. Beck, RBF Consulting, Re: South Orange County Transportation Infrastructure Improvement Project Foothill-South Toll Road (Feb. 6, 2008) (attached as Exhibit 42).

ii. The Biological Opinion for the Toll Road Demonstrates the Severity of the Project's Impacts on Listed Species.

In its reply brief, TCA implies that the BO recently issued by FWS demonstrates that the Toll Road's harm to listed species and their habitats would be minimal. This is not the case. First, simply because a species does not go extinct does not mean that major damage has not occurred. And second, key conclusions of the Biological Opinion are undermined by the Service's own prior analyses.

The ESA requires federal agencies to "consult" on the impacts of federal actions that may adversely affect listed species. *See* 16 U.S.C. 1536(a)(2). The purpose of consultation is to ensure that the action will not jeopardize endangered species or adversely modify their designated critical habitat. *Id.* The purpose of a BO is to express the FWS's opinion, based on the best available scientific information, regarding whether the action will do so. *See generally* 50 C.F.R. § 401.14. The definition of "jeopardy" under the ESA – "to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild," 50 C.F.R. § 402.02 – means an impact so severe as to reduce the likelihood of a species' *very survival over its entire range*, or, put another way, to increase the likelihood of actual extinction. *See generally Gifford Pinchot Task Force v. U.S. Fish & Wildlife Service*, 378 F.3d 1059, 1069-70 (9th Cir. 2004) (distinguishing government's duty under ESA to avoid jeopardy, defined as mere survival, from corresponding duty to ensure conservation and recovery of endangered species).

Thus, even where a project may not drive a species over the brink of disappearance, it may nonetheless have significant adverse impacts. *See, e.g.*, *Nat. Res. Def. Council v. Winter*, 518 F.3d 658, 691-92 (9th Cir. 2008) ("An agency action can have 'significant effects' on the environment short of threatened extinction."); *Makua v. Rumsfeld*, 163 F. Supp. 2d 1202, 1218 (D. Hawai'i 2001) ("Clearly, there can be a significant impact on a species even if its existence is not jeopardized."). The Coastal Zone Management Act is concerned with all coastal impacts of a project, not just those that might drive a species out of existence. *See* 16 U.S.C. § 1451(d), (e), (k).

The BO for the Toll Road reveals that the project will have a number of adverse, unmitigated impacts on listed species and their habitats. For example, with respect to the arroyo toad, the BO finds that individual toads present in the Toll Road area will be crushed and killed during construction.[124] Even more seriously, "[l]oss of upland areas for foraging, aestivation, and dispersal could affect toad populations through increased competition for limited resources or increased predation risk," and that these "impacts to and isolation of upland arroyo toad habitat are not offset by the proposed project."[125]

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[124] TCA Supp. App. 6-50 at 61-62.

[125] TCA Supp. App 6-50 at 65. In fact, the impact to the arroyo toad may be considerably worse than recognized in the BO. An expert familiar with the San Mateo population of the toad testified to the Commission that "The tollroad in this location would degrade and fragment this extraordinary relict of a once-larger functional ecosystem in Southern California," with the end result being a loss in population viability for the arroyo toad within and without the coastal zone. TCA App. 1-4(H) (*Lovich 2007 Letter*) at 4-5 (PDF pp. 8-9).

Addressing the California gnatcatcher, the BO similarly finds that "the negative effects of the proposed project on gnatcatchers include loss of habitat for a substantial number of gnatcatcher pairs," a vast majority of which occur on Camp Pendleton – in other words, close to and within the coastal zone.[126] In addition,

> The proposed project will increase fragmentation of gnatcatcher habitat by creating a road through the Habitat Reserve and through remaining habitat west of San Mateo Creek. Connectivity between the large gnatcatcher populations on Camp Pendleton and southern Orange County will also be reduced. Finally, the proposed project could increase fire frequency in habitat surrounding the road, which could, in turn, lead to habitat degradation over the long term.

Id. The BO also recognizes the unique connectivity value of the maritime habitat affected by the Toll Road and deems TCA's proposed mitigation measures inadequate:

> Other than replanting the cut and fill slopes adjacent to the road with coastal sage scrub species, no restoration or conservation of coastal sage scrub proximal to the impacts on Camp Pendleton is proposed. Thus, the proposed conservation and restoration will benefit the gnatcatcher populations in greater Chiquita Canyon and the coastal subregion of the NCCP/HCP, but due to the distance between the Base and the conservation area, this conservation measure will not directly offset project impacts to the gnatcatcher population at Camp Pendleton or to connectivity between Camp Pendleton and southern Orange County.[127]

Unmitigated impacts to coastal populations of the least Bell's vireo, an endangered riparian bird, are recognized as well: "A small amount of vireo habitat is proposed for restoration between San Onofre and San Mateo creeks, but this restoration is not anticipated to offset impacts to these two populations."[128] In sum, the BO itself identifies significant and unmitigated impacts to these species and their habitats – impacts TCA cannot dismiss as unimportant.

The BO also identifies a number of serious impacts to the critically endangered Pacific pocket mouse ("PPM"), including loss of habitat connectivity, death or injury from capture and relocation, "roadway associated mortality" (in plain English, roadkill), increased predation, and night lighting.[129] The BO also concludes that many of TCA's proposed mitigation measures for the fragile San Mateo North population, including construction of passages under the road and relocation efforts, are not likely to work.[130] Another mitigation measure proposed by TCA, a barrier to prevent mice from entering the roadway, has not yet been designed, so its effectiveness is impossible to evaluate.[131] The BO paints a grim picture for this population of PPM, which would be forever cut off from another small nearby population on Camp Pendleton and from additional habitat into which it might someday expand. Given the extremely

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[126] TCA Supp. App. 6-50 at 89 (23 to 27 of the 25 to 31 total pairs affected are on Camp Pendleton).
[127] *Id.* at 89-90.
[128] *Id.* at 107.
[129] *See generally id.* at 155-62.
[130] *See id.* at 158-59.
[131] *See id.* at 156-57.

precarious condition of the species, these severe and unmitigated impacts must be given great weight here.

TCA relies on the BO's conclusion that the Toll Road will not directly displace any known, occupied PPM habitat.[132] The conclusion lacks credibility. As one top PPM expert explained to the Commission,

> [i]f there is one thing that many years of trapping experience with this species tells us, it is that PPM are exceptionally variable over both space and time in their detectability using live traps (or any other method), and that their frequently low and unpredictable detectability makes it very difficult to prove absence from a site using trapping surveys.[133]

The Commission's own biologist reached much the same conclusion after independently reviewing the trapping and survey results and the materials submitted by TCA's consultants.[134] Yet the BO purports to do exactly what these experts said TCA had failed to do: prove absence from the areas affected by the Toll Road using existing trapping surveys.

Indeed, the Biological Opinion discusses at length the difficulty of locating the pocket mouse, particularly during periods of low abundance, and discusses the intensive methods required to find them. It concludes that the various survey efforts employed at the PPM population site closest to the Toll Road lacked common, consistent methodological features that would allow FWS to make reliable inferences about population size or dynamics at the site.[135] Accordingly, although the BO says that no known, occupied habitat will be directly impacted, it also says that nobody knows exactly what habitat is occupied because adequate survey results do not exist. Properly read, the BO does not support TCA's suggestion that the Toll Road will have no impact on occupied PPM habitat.

On the other hand, the Toll Road indisputably will affect a great deal of potential expansion habitat for the mouse – habitat essential to its long term survival[136] that will be either directly destroyed or forever cut off following construction. The final BO downplays the significance of this impact, but only at the expense of the best available science.

Indeed, a Draft BO prepared by FWS staff reviewed the available literature and documented these impacts, concluding that

> Cumulatively, the direct loss of habitat in the toll road alignment in addition to loss of habitat east of the roadway *will result in the loss of 19 of 37 ha (47 of 92 ac), or 51 percent of the habitat ranked as having "high" or "very high" habitat suitability within*

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[132] *See id.* at 164; TCA Reply at 15.
[133] TCA App. 1-4(C) at 6 (PDF p. 15).
[134] *See* TCA App. 2-5(A) at 3-5 (PDF pp. 3-5).
[135] TCA Supp. App. 6-50 at 148.
[136] *Spencer 2005 Letter* at 4.

> *the action area*.[137]

The entire multi-page analysis in the Draft BO documenting the severity and consequences of these impacts, however, *was excised from the final version without any justification or explanation*.

The information included in the Draft BO but omitted from the final underscores the Toll Road's fundamental inconsistency with the adopted recovery plan for the pocket mouse. According to the recovery plan, "[l]oss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies' survival," and "further losses of occupied or *potential* habitat would seriously reduce the probability of the persistence of the subspecies."[138]

But according to the Draft BO, this loss of expansion and restoration habitat – *the very information purged from the final version* –would result in a reduction in the "carrying capacity" of San Mateo North *by over half*, with severe consequences:

> In the absence of conservation measures to increase and/or improve habitat remaining after construction of the toll road, the loss would appreciably increase the vulnerability of this population to extirpation by limiting the size the population can achieve during population expansion events and by restricting the ability of animals to shift their use of space over time in response to changes in resource availability, competitors, predators, and structural changes to the plant community.[139]

The final BO, rather than acknowledging this problem, relies entirely on TCA's proposed Pacific Pocket Mouse Resource Management Plan (PPMRMP) for restoring former agricultural fields. This is wishful thinking. Not only is the amount of former agricultural fields only approximately half the size of the potential habitat that will be lost according to the Draft BO,[140] but the restoration of this land to occupied Pacific pocket mouse habitat *has never been attempted, let alone accomplished*. The Service provides not a shred of evidence that the proposed management plan is anything other than experimental.

Moreover, while improved management for the pocket mouse is certainly needed, construction of a toll road through its habitat is not a necessary precondition. Camp Pendleton's Integrated Natural Resource Management Plan (INRMP) calls for management and restoration for the PPM:

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[137] U.S. Fish & Wildlife Service, Draft Biological and Conference Opinion, Proposed Toll Road Corridor (Alignment 7 Corridor- Far East Crossover-Modified; A7C-FEC-M) Initial Alternative for the South Orange County Transportation Infrastructure Improvement Project ("*Draft BO*") at 83 (attached hereto as Exhibit 18) (emphasis added).
[138] *PPM Recovery Plan* at 34 (emphasis added).
[139] *Draft BO* at 83.
[140] *See id.* at 97.

> *Chapter 4–Natural Resources Management*
>
> Upland Habitat Studies for Listed Species. The Base contracted the USFWS to develop methodology for identifying upland habitat areas that are important to actively manage for selected listed upland species, including . . . PPM. Development of this methodology will enable the Base to better maintain habitat for listed upland species populations during project planning and will identify sites for potential future mitigation, compensation, or stewardship.
>
> Among other required elements, this research will involve: (1) determining the utility of existing data and imagery for monitoring landscape level habitat changes; (2) mapping of selected areas and field verification of existing GIS layers; (3) locating, designating, and mapping all habitats within selected areas that have the potential to become suitable for federally listed upland species; (4) determining the general restoration approach for potential habitat areas; and (5) prioritizing the importance of selected habitat areas, including consideration of patch size and connectivity/proximity to adjacent populations and habitat (both on and off Base).[141]

The BO also acknowledges this:

> The Marine Corps continues to work cooperatively with the Service to conserve PPM on the Base. The Marine Corps is currently in formal consultation with the Service regarding all Marine Corps activities in upland habitats on the Base, and the Marine Corps has committed to continue to conserve and monitor PPM on the Base and promote research and other actions that lead to the recovery of this species.[142]

Consultation between the Marines and FWS thus will result in the specific management and restoration efforts anticipated by the INRMP. Indeed, Camp Pendleton is currently developing a management plan for PPM in conjunction with FWS and USGS.[143] The Toll Road – which will not only permanently destroy a great deal of this habitat, but also encroach on the base and negatively impact its training mission – is not needed for the Marine Corps to steward its land according to federal law.

The California Department of Parks and Recreation, in support of the INRMP, also provides stewardship for the San Mateo North population of PPM, consisting of fencing around the occupied area (with repairs as needed), fuel modification zones designed around the habitat, control of human access, weed control to reduce fire threat, ranger patrols to control mountain bikers and restoration of such damage, signage and public education, and a prescribed burn in 2000 to enhance habitat.[144]

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[141] Marine Corps Base Camp Pendleton, *Integrated Natural Resources Management Plan* (March 2007) ("*2007 INRMP*") at 4-34, *available at* http://www.cpp.usmc.mil/base/environmental/inrmp.asp (last visited May 25, 2008).
[142] TCA Supp. App. 6-50 at 145.
[143] Ken Quigley, Environmental Planner, Camp Pendleton, pers. comm. with D. Silver, Endangered Habitats League (May 28, 2008).
[144] D. Pryor, California Department of Parks & Recreation, pers. comm. with D. Silver, Endangered Habitats League (May 23, 2008).

In conclusion, the Toll Road's impacts are flatly incompatible with the guidance set forth in the PPM Recovery Plan:

- "Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies' survival. All extant populations are essential. These populations should be protected and secured from significant potential impacts."[145]

- "[F]urther losses of occupied or potential habitat would seriously reduce the probability of the persistence of the subspecies."[146]

- "Population persistence and expansion should be maintained by precluding actions which result in physical barriers to movement, habitat fragmentation, or an increase in edge effects."[147]

The Toll Road's impacts on the Pacific pocket mouse and other threatened and endangered species will be dramatic. The final BO for the project, despite inappropriate omissions and attempts to downplay these impacts, nonetheless confirms that they will be both severe and unmitigable.

Finally, the BO implicitly recognizes that the ESA demands more than just avoiding approval of projects that will drive endangered species extinct. On the contrary, the ESA requires all federal agencies to use the powers at their disposal for "conservation," that is, allowing threatened and endangered species to recover to the point that the protections of the ESA are no longer necessary. *See* 16 U.S.C. §§ 1532(3), 1536(a)(1). Given the scope and gravity of these effects, therefore, it is no wonder that the BO offers "conservation recommendations," foremost among which is a plea for analysis of alternative alignments:

> We recommend that FHWA, TCA, and Caltrans continue to explore the feasibility of alignment alternatives that are further west than the proposed project as we believe that such alignments will have less impact on federally listed species, primarily arroyo toad and gnatcatcher.[148]

The BO does not support TCA's claim that the Toll Road's impacts will be minor. On the contrary, it supports a strong argument that the Toll Road should not be built in the location proposed at all.

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[145] *PPM Recovery Plan* at 34.
[146] *Id.*
[147] *Id.* at 21.
[148] TCA Supp. App. 6-50 at 173.

iii. The Toll Road Will Negatively Impact Coastal Wetlands.

Focusing on the acreage of coastal zone wetlands occupied by the project (0.16 acres of permanent impacts and 7.7 acres of temporary impacts), TCA has sought to portray the Project's wetland impacts as minor and mitigable through the creation of one acre of new wetland directly adjacent to a proposed detention basin and the Toll Road structure.

In fact, the impacted wetlands are part of a "highly diverse, intact, and regionally significant complex of habitats supporting special status species" – one of the increasingly rare functional ecosystems remaining in Southern California – and as such have a high ecological value largely ignored by TCA.[149] TCA's proposed mitigation "cannot mitigate either the direct or indirect impacts" of the Toll Road on this important coastal wetland habitat.[150]

TCA's mitigation proposals would be biologically and functionally inadequate. TCA proposes to "create" 15.9 acres of wetlands and riparian habitat in the San Juan Creek watershed.[151] The wetlands taken by the Toll Road, however, would be lost from a rare and irreplaceable coastal complex of wetlands, estuary, marsh, and adjacent uplands, all part and parcel of an undammed and relatively pristine watershed. Riverine and estuarine resources at the broad ocean mouth of a creek cannot be replaced by "recontouring uplands"[152] in a canyon 15 to 20 miles inland – well outside the coastal zone and in a different watershed. The species compositions and biological functions and values are all different, and even if successful, would result in a *net loss* of coastal wetland resources.[153]

Following submission of its original consistency certification, TCA identified an acre of fallow agricultural land adjacent to I-5 that it proposes to restore to "southern willow woodland" in mitigation for impacts to wetlands within the coastal zone. This proposed mitigation area is within the Project right-of-way in the same location as one of the extended detention basins ("EDBs") that TCA has proposed to treat surface runoff from I-5.[154] This location cannot replace the lost functions and values of the natural channels of San Mateo Creek and its wetland-upland complex.[155] The hydrology of the proposed mitigation area, located around a storm water detention basin, cannot possibly mimic the hydrology of the natural floodplain.[156] Also, because the entirety of the mitigation area is so close to I-5 and the merging

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[149] TCA App. 1-4(A) at 4.
[150] *Id.* at 2.
[151] TCA App. 13-31(B) at 54 (PDF p. 57).
[152] *Id*.
[153] W.D. Spencer, Ph.D., *Letter to California Coastal Commission*, August 17, 2007 at 3 (attached as Exhibit 10).
[154] *Compare* TCA App. 10-23(A), Ex. 6 (PDF p. 25), *with* DEIS/SEIR Appendix A.1, Route Plan for A7C-FEC-M Initial at 6 (Sheet 5) (attached as Exhibit 19).
[155] M.D. White, *Letter to Endangered Habitats League*, Sept. 13, 2007 at 3.
[156] *Id*. at 3.

Toll Road,[157] it would *all* be subject to adverse edge effects. With a maximum width of 200 feet, it is well within the range of such effects.[158]

TCA's functional assessment of the impacted wetlands and "restored" mitigation site suffers from numerous deficiencies. The metrics used in the assessment to measure functional capacity are statistically biased to disfavor certain critical functions of the impacted wetlands (such as landscape context and connectivity) without any substantiation.[159] Nor does the assessment even consider any indirect impacts, such as noise and vibrations, lights, altered runoff, generation of dust and contaminants, or air quality impacts.[160] Michael White, an aquatic biologist with 20 years of experience, has conservatively estimated that indirect impacts would permanently degrade roughly 5 to 7 additional acres of wetland and riparian habitat within the coastal zone (*excluding* wetlands inside of the existing Interstate-5 indirect impact zone).[161] In addition, another 2 to 40 acres of wetland and riparian habitat currently lying within the existing indirect impact zone of I-5 will be even further degraded by the Toll Road.[162] None of these indirectly impacted wetlands is accounted for in the proposed mitigation.

The functional assessment used by TCA to assess the impact and mitigation areas is, according to Michael White, an aquatic biologist with 20 years of experience in California, "statistically biased and unsubstantiated."[163] For example, the only consideration of landscape context is the metric "Land Use/Land Cover," whose score is swamped by 20 other metrics. "Furthermore, the landscape position and connectivity of the wetlands in the coastal zone, one of the irreplaceable conservation values of these resources, is not adequately quantified in the analysis." As a result, the true functions and values of the marsh-estuarine-riparian complex at San Onofre are greatly underestimated. [164] Finally, TCA's assessment gives temporary impacts from construction a zero score, without providing any evidence that the impacted lands are capable of being restored to their prior condition.[165]

These deficiencies grossly distort the relative benefits of the proposed mitigation – despite the lack of a detailed mitigation plan. "It is hard to envision how the proposed mitigation site could have about the same Functional Capacity Score as the existing habitats (e.g., Table 1 vs. Table 5), particularly without the details of the wetland creation plan."[166]

The technical efficacy of creating new wetlands is itself questionable, particularly for the high resource values affected by this project.[167] The US Department of the Interior has stated that a big problem with mitigation projects is that often "the quality of the resulting

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[157] TCA App. 14-31(E), Ex. 3 (PDF p. 39).
[158] M.D. White, Letter to Endangered Habitats League, Sept. 13, 2007 at 3.
[159] TCA App. 1-4(A) at 3.
[160] *Id.* at 2-3.
[161] *Id.* at 3.
[162] *Id.*
[163] TCA App. 1-4(A) at 3.
[164] *Id.*
[165] *Id.* at 4.
[166] *Id.* at 4.
[167] *Id.*

mitigation wetland is not equal to the wetland that was destroyed."[168] The DOI also states that "wetland scientists are becoming aware that the many unknowns make it virtually impossible to provide definitive guidelines for successful wetland assessment and design."[169] In addition, a recent review of mitigation projects in California permitted from 1991-2002 (Ambrose et al. 2006) found that mitigation wetlands are not similar to those impacted by the permitted project.[170] TCA has not explained how the proposed wetland creation would overcome these problems.

Aquatic biologist Michael White, drawing on his specific expertise in assessing watershed integrity within the area of the project, has concluded that:

> The proposed FTC-S project would produce a much greater level of impact to these resources than is acknowledged by the project proponents, and these impacts are not adequately mitigated by their proposed mitigation measures. There would clearly be a net loss of wetland functions and values and "significant disruption of habitat values" as a result of the FTC-S project, which is at odds with National and State policies on wetlands protection.[171]

In sum, none of mitigation offered by TCA would replace the coastal wetland values that would be destroyed by the Toll Road.

iv. The Toll Road Will Have Devastating Impacts on Coastal Recreational Resources.

The Foothill-South would not only severely impact but would *run right through* one of California's most popular parklands, the state park at San Onofre State Beach. The massive highway would directly occupy approximately *four miles* and over *320 acres* of the park, and fragment and degrade the remaining lands, including those within the coastal zone.[172] The highway would literally run through the center of the Park's entire inland subunit (Subunit 1) splitting the park along its spine. The California Department of Parks and Recreation ("Parks Department") – in a study commissioned by TCA itself – concluded that it would likely be forced to abandon nearly all of Subunit 1, over 1,000 acres (approximately 60% of the park). This could ultimately result in the closure and abandonment of San Mateo Campground, the park's most popular campground, and the trails that lead from the campground to Trestles Beach.[173]

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[168] Randall J. Hunt, *Do Created Wetlands Replace the Wetlands that are Destroyed*? US Department of the Interior & US Geological Survey, Fact Sheet No. FS-246-96 (attached as Exhibit 20).
[169] *Id.*
[170] M.D. White, *Letter to Endangered Habitats League*, Sept. 13, 2007 at 3 (attached as Exhibit 21).
[171] *Id.* at 3-4.
[172] California Department of Parks and Recreation, *Map of Area Impacted by the Foothill-South*, Jan. 9, 2006 (attached as Exhibit 22).
[173] TCA App. 31/32-57, Comment O25, Ex. 1 (California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* (Aug. 1997) ("*Parks Dept. Mitigation Assessment*") at 6 (PDF p. 235); California Department of Parks and Recreation, *Comment Letter to TCA*, January 10, 2006 ("*Parks Dept. Comment Letter*") at 5 (attached as Exhibit 23).

Never before in California has a local governmental entity like TCA sought to take state parkland to develop a major infrastructure project, much less a project of this scale. The loss of state parkland and major coastal access facilities inflicted by this Project, as well as its indirect impacts on coastal and water recreational resources, is unprecedented and, as found by the Commission, in direct violation of the Coastal Act's public access and recreation provisions. The Project's impacts on San Mateo Campground and Trestles Beach are discussed in more detail below.

San Mateo Campground

San Mateo Campground – located just outside the coastal zone and connected by a trail to Trestles Beach – is one of the most important coastal recreational resources in the region. Today, San Mateo Campground receives over 100,000 visitors a year.[174] The San Mateo Campground's popularity comes from its relatively isolated location in an undeveloped coastal canyon along San Mateo Creek.[175] In addition, the campground provides increasingly rare low-cost accommodations for the region's coastal visitors. San Mateo Campground accounts for more than 10% of coastal campsites within a 50-mile radius.[176] As the Parks Department has stated about the campground, "the affordability of this coastal resource for middle and lower income visitors makes it even more important that it be kept intact and undiminished."[177]

The Campground not only provides public access to the coast, but it is an intrinsic and essential part of what makes Trestles Beach a unique experience for visitors. Trestles is one of the only remaining beaches in Southern California that is not directly accessible by automobile and must be hiked into. One of the beach's primary attractions is the highly scenic trail linking it to San Mateo Campground, which runs through "a relatively unspoiled wetlands area" down to the beach, allowing visitors to experience the natural transition of the native landscape.[178] The Campground itself is also part of the coastal experience. Visitors who camp or picnic in the inland portions also walk to the coast to swim, surf, relax on the beach, and explore the Park's successive habitats, including surf, reef, beach, coastal bluff, wetland, grassland, sycamore groves, scrub, hills, arroyos, and valleys, along with abundant wildlife, all of which together make San Onofre unique.

The campground is not only an essential coastal resource – it is irreplaceable. Aside from a long-planned facility at Crystal Cove State Beach that will replace an existing trailer park,[179] the Parks Department has been unable to add a single campground along California's coast in the 16 years since San Mateo Campground was constructed. And there are no sites left in the region that would be capable of providing comparable public access and

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[174] *Parks Dept. Comment Letter* at 6.
[175] *Id.*
[176] Figure, *Southern California Campgrounds*, California State Parks Foundation and GreenInfo Network, 2007 (attached as Exhibit24).
[177] TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*) at 2-3 (PDF pp. 230-31).
[178] TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*) at 2 (PDF p. 230).
[179] *See* Crystal Cove State Park General Plan (March 1982) at 43-44 (attached as Exhibit 25).

recreational value. According to the Parks Department, "the existence and convenient availability of such an increasingly rare resource and experience to the large Southern California population serves an important societal function which once lost cannot be replicated in whole elsewhere in this region."[180]

TCA continues to ignore the reality that San Mateo Campground would be effectively shut down by the Toll Road. According to TCA, the Project footprint would avoid the campsites themselves. However, the Toll Road would come within 200 feet of the campsites. The Project would place the Campground – now located in a quiet, undeveloped coastal canyon – in the shadow of a major highway, with a view of massive soundwalls on engineered hillsides. Campers, hikers and picnickers would be plagued by construction noise in the short term, and traffic noise permanently.[181] In short, the Campground's "spirit of place" – a term used by the Parks Department – would be destroyed.[182]

Indeed, this is such a serious loss that the Department ultimately may have to abandon nearly all of Subunit 1, including all 161 sites in the campground and over 1,000 acres of surrounding parkland.[183] Several years ago, the Department convened a "San Onofre Mitigation Assessment Team" to evaluate possible mitigation measures in the event that TCA approved a toll road alignment through San Onofre. After reviewing the team's recommendations, the Department reached some dramatic conclusions:

> [T]he fragmentation of Subunit #1 by the proposed highway corridor will severely restrict the use of the property for recreation purposes, as well as significantly and irrevocably altering its environmental setting, that of San Mateo Campground, and other recreational opportunities provided for in the unit's General Plan. The linear nature and split elevation of the arterial and any retaining walls, soundwalls, and their landscaping will reduce the site's attractiveness to the public, as well as being a wildlife barrier and a management obstacle. These unnatural and discordant visual elements will intrude upon previously open vistas, high volume noise will impose on normal recreation activities, day activities at the campground as well as its existing night quiet, and the amphitheater campfire area will be forever altered and rendered unusable.[184]

As a result of these impacts, the mitigation assessment team concluded that the proposed toll road alignment "will result in a take of the functional use of the majority of Subunit #1" of the park, and recommended that "[w]ith the exception of the support parking for the trail to Trestles, all of Subunit #1 be abandoned to the lessor."[185] In its comment letter to TCA on the FSEIR, the Department reiterated its concerns about the destruction of San Mateo Campground:

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[180] *Parks Dept. Comment Letter* at 5.
[181] TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*), Appendix B (PDF pp. 245-49).
[182] *Id*. at 2; *see also id.*, Appendix A at A-3 to A-4 (PDF pp. 241-42).
[183] *Parks Dept. Comment Letter* at 5; TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*) at 6 (PDF p. 235).
[184] TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*) at 5 (PDF p. 234).
[185] *Id.* at 5, 6 (PDF pp. 234-35).

> It does not take an expert to understand that locating a multi-lane, limited access highway within a few hundred feet of a secluded campground will so destroy the recreational value of the campground and sense of place as to render it valueless. . . . [P]eople who use San Mateo Campground do so because of its relative quiet and seclusion. They do not go camping to be next to a multi-lane highway and have their views truncated by a 16' high soundwall.[186]

The letter also reported the grave concern of Department staff that "the result of these impacts will be the eventual loss of San Mateo Campground."[187] TCA now relies on a generic letter of support from the Secretary of the California Resources Agency, which vaguely promises that the campground will remain both open and "enjoyable," yet offers nothing to contradict the careful analysis of Department staff. TCA Br. at 38 (citing TCA App. 5-13(D) (PDF p. 43)). Nor does this letter offer any new ideas for preserving the quiet, rural camping experience currently offered at San Mateo Campground – an experience, if TCA has its way, that will soon be replaced by a noisy, industrial camping experience in the shadow of the Toll Road's sound wall.

The Toll Road thus very likely spells destruction of a major coastal resource. The 100,000 annual State Beach visitors who use the Campground – including working families and other users who rely on this affordable facility – would be severely impacted. In addition, the existing highly scenic trail connecting San Mateo Campground to Trestles Beach – which runs under the interstate but is an essential natural experience, traversing the native landscape – would be destroyed and replaced by an urban pedestrian overpass that follows the Toll Road and actually requires crossing *over* it.[188] This highway-dominated route would constitute a fundamental change in the unique visitor experience of Trestles.

TCA also cites the fact that the park is situated on federal land not owned by the State, but the ownership of the land is immaterial. The park provides the same benefits to the public whether leased or owned by the State. Moreover, since its inception, it has been understood that the park is meant to be permanent. President Nixon, Governor Reagan, and the California Legislature have all made clear that San Onofre is to forever remain a state park. When President Nixon presided over the creation of the state park at San Onofre, he declared that, as soon as it is possible for the federal government to declare the property surplus, the lease will be terminated and the property "will be *deeded* to the State of California for park purposes."[189] Governor Reagan agreed: "This expanse of acreage, San Onofre Bluffs [*sic*] State Beach, *now has its future guaranteed* as an official state park."[190] The intent to permanently preserve the land as a park is reflected in California law, which provides that "if the Camp Pendleton Marine Base in the County of San Diego ceases to be used as a federal facility, *it shall be converted to an open-space area or greenbelt* that shall be administered by the [Parks] [D]epartment." Pub. Res. Code § 5096.400 (emphasis added). State law further provides that "[a]ll real property acquired for park and recreation purposes by the state which was formerly

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[186] *Parks Dept. Comment Letter* at 4-5.
[187] *Id.* at 6.
[188] TCA App. 24-52 at 4.25-27 (PDF p. 28); TCA App. 14-31(E), Ex. 3 (PDF p. 39).
[189] President Richard Nixon, *Press Statement*, March 31, 1971 (attached as Exhibit 27).
[190] California Governor Ronald Reagan, *Press Statement*, April 3, 1971 (emphasis added) (attached as Exhibit 27).

part of Camp Pendleton *shall be used solely for park and recreation purposes and no part thereof shall be declared surplus or disposed of*." Gov. Code §11011.7 (emphasis added). There is simply no basis for concluding that, after a half century as a public park, the land will not continue as a park following the expiration of the current lease term.

TCA's failure to acknowledge any public access or recreational impacts from the Project is mirrored by its failure to provide any meaningful mitigation for those impacts. For years, TCA's only approach to the issue of mitigation was to defer it. The FSEIR never identified any specific measures to replace lost park lands or provide substitute recreational resources. Rather, TCA merely promised to "consult" and "negotiate" with owners or operators of affected recreational resources at some unspecified point in the future.[191] As the Parks Department itself put it in a letter to TCA regarding the FSEIR, these "promises to talk" mitigate nothing and commit TCA to nothing.[192] Indeed, as discussed above, these resources are unique in the region and are literally irreplaceable.[193] TCA's original consistency certification likewise offered no mitigation, taking the approach that impacts to San Onofre are not an issue – an attitude the Parks Department correctly identified as "simply not grounded in reality."[194]

Then, less than two weeks before the Commission's hearing, TCA came up with a new approach to parks mitigation: offer money. TCA has offered to pay the Parks Department $70 million that, according to TCA, could be used to renew the SOSB lease in the year 2021, and another $20 million to restore cottages at Crystal Cove or construct campsites in that park or at San Onofre. As detailed below, however, none of this money would mitigate the impacts of the Toll Road. There is no basis for concluding that *any* money (much less $70 million) will be required to renew the San Onofre lease 14 years from now. And the other expenditures identified by TCA are for projects that are *already planned and will occur with or without the Toll Road*.

Moreover, none of the projects identified by TCA could mitigate the loss of San Mateo Campground, which offers low-cost, quiet, relatively undeveloped coastal camping accommodations that are impossible to duplicate – and therefore irreplaceable – in the region. As the Parks Department has stated:

> The existence and convenient availability of such an increasingly rare resource and experience to the large Southern California population serves an important societal function which once lost ***cannot be replicated in whole elsewhere in the region***. California State Parks asserts that the fragmentation of the park by the proposed preferred alternative leaves no real opportunities for on-site mitigation for the values, resources and recreational opportunities for which this park was established. Our knowledge of the region leads us to conclude that ***losses to the existing unit cannot be fully mitigated***.[195]

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[191] TCA App. 24-52 at 4.25-28 to 4.25-29 (PDF pp. 29-30).
[192] *Parks Dept. Comment Letter* at 7.
[193] *See id.* at 8.
[194] *Id.* at 4.
[195] Parks Dept. *Comment Letter* at 8.

There is simply no conceivable rationale under which a major coastal recreational facility created at the insistence of the Coastal Commission to satisfy the requirements of the Coastal Act can now be eliminated consistent with the Act. The severe loss of public access and coastal recreational opportunities that would be caused by the loss of San Mateo Campground renders the Project inconsistent with the Act's policies requiring maximum public access, protection of lower cost coastal recreational opportunities, and avoidance of impacts to parks.

Trestles Beach

The Toll Road also directly impacts Trestles Beach – a world-class surfing destination.[196] Trestles Beach is known among surfers as the "Yosemite of surfing" and has attracted the likes of some of the world's most famous surfers, including Kelly Slater, who won a surfing competition there in 1990. It is the *only* beach in the continental United States where the Association of Surfing Professionals' World Championship Tour holds a competition,[197] and is host to numerous other professional and amateur surfing competitions throughout the year, including the National Scholastic Surfing Association's national championships. This is not your average surf spot – so many people visit Trestles that there is a "crowd in the water" for just about any given swell.[198] Trestles Beach was first discovered by pioneering local surfers in 1933 and is now historically recognized as having played a significant role in the evolution of surfing as a sport. In fact, Trestles is potentially eligible for nomination as a State Historic District, as a California State Point of Historic Interest (on the California Register of Historic Resources), and to the National Register of Historic Places.[199]

In addition to the public access impacts to Trestles that would be caused by the loss of San Mateo Campground, the Toll Road threatens to impact the internationally renowned surfing conditions found at Trestles. These conditions are created and maintained by sediment influx from San Mateo Creek and its tributaries, including Cristianitos Creek. Cobblestone rocks are carried down the creek and deposited in a delta, which leads to the world class waves that break left and right year-round.[200]

TCA refuses to acknowledge the potentially drastic effect the Toll Road could have on Trestles, claiming that no significant permanent adverse effects would damage coastal surfing. TCA asserts that the supply of sediment from inland would not be significantly changed

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[196] The Trestles beach includes several surfing hot spots in the coastal zone that would be affected by the project, including Cotton's Point, Upper Trestles, and Lower Trestles. *See* TCA App. 31/32-57, comment O21-417 (PDF pp. 85-86).

[197] ASP World Tour, http://64.78.18.131/asp2005/2006news.asp?rView=w&rEventName=&rEvent=trestles06&rCode=5943 (last visited January 16, 2008).

[198] Phillip Williams & Associates, Ltd., "Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area," January 11, 2006 ("*PWA 2006 Report*") at 3 (attached as Exhibit 28).

[199] California State Parks and Recreation Department, *Letter from Historian A. Bevil to M. Rauscher*, dated Aug. 31, 2007 (attached as Exhibit 29).

[200] TCA App. 31/32-57, comment O21-417 (PDF pp. 85-86).

and that, therefore, the cobblestone delta which supports wave formations would remain stable.[201] However, TCA's analysis is flawed.

As discussed in section IV.A.2.a.vi below, TCA fails to account for the devastating effects of the Toll Road on 20 subwatersheds proximate to the mouth of San Mateo Creek, which have a disproportionate effect due to proximity.[202] These steep canyons are sources of fine sediments. An engineering study, which included field reconnaissance, shows that paving and cut and fill from the Toll Road – over 40 million cubic yards[203] – will "result in massive hydrological changes" to these fragile subwatersheds.[204]

The erosion impact to a stream channel is exponentially proportional to the percentage of upstream watershed that is impermeable or disturbed.[205] The upstream portion of the eight subwatersheds closest to the mouth of the creek would be disturbed 40% on average,[206] a level associated with severe erosion and channel degradation in the vicinity of the Project.[207] Within many of the destabilized canyons, the sediment transport and hydrology of streamcourses will be "highly altered."[208] The combination of disturbance of watersheds and concentration of flow in culverts is likely to cause erosion of fine sediments and destabilization of stream channels. TCA's proposed BMPs (energy dissipation at culvert outlets and revegetation along cut and fill slopes) will not fully address impacts associated with flow concentration, increased runoff, and the potential for significant soil erosion.[209]

This is not the first time TCA has relied on BMPs to support a claim that its projects will not cause erosion. It made precisely the same claim for the San Joaquin Hills Transportation Corridor. Yet a fill constructed to similar standards on another of TCA's toll roads failed in upper Deer Creek canyon, causing severe erosion that was dumped into Crystal Cove State Park.[210] TCA claims to have learned "lessons" from that project. But the state's pristine watersheds and coastal parks are not the place to conduct major erosion control experiments. Optimistic claims that BMPs will prevent erosion for major roadway projects have been repeatedly proven wrong.[211] It is simply disingenuous to claim that a cut and fill project of this magnitude in a highly erosion-prone area will not have an impact on creek sedimentation. Moreover, as discussed below, hydrology experts and the Regional Board have reviewed TCA's

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[201] TCA App. 13-31(B) at 24 (PDF p. 27).
[202] *PWA 2006 Report at 12.*
[203] TCA's insistence that the Commission should consider only the 1.4 million cubic yards of cut and fill that would occur within the coastal zone is illustrative of TCA's repeated attempts to downplay the impacts of the Project. The Commission has clear authority to consider any of the Project's sedimentation impacts within the San Mateo Creek watershed that will flow into and impact the coastal zone.
[204] *PWA 2006 Report at 13.*
[205] TCA App. 1-4(E) at 1, 2.
[206] *PWA 2007 Analysis* at 1.
[207] *PWA 2006 Report* at 2.
[208] *Id.* at 21.
[209] M. Lindley, Philip Williams & Associates, Ltd. (pers. comm. January 17, 2008).
[210] *Parks Dept. Comment Letter* at 14.
[211] *See id.* at 13-14 (describing Caltrans roadway project that caused "tons of sediment" to overwhelm drainages in a northern California State Park).

proposed RMP and have determined that there is no basis for concluding the plan will prevent sedimentation.

The Toll Road thus poses a risk to Trestles. Increased delivery of silty sediments has the potential to affect cobble deposition, and thereby alter wave formation. This can occur in two ways. First, a sediment mix richer in fine materials will tend to deposit gravel and cobble in the creek bed, and carry the finer sediments out to the mouth, reducing delivery of cobble to Trestles.[212] Second, once exposed to wave action, the changes in the relative amounts of fine and coarse sediments will alter the "porosity" of the mix, resulting in cobble moving onshore or offshore.[213] These changes in cobble transport and deposition may change the morphology of the delta and alter wave formation.[214]

TCA's response to this issue has been to deny that the Toll Road will cause any increase in sediment delivery to the creek in the first place. As discussed above and in section IV.A.2.a.vi below, there is no basis for TCA's position. Sedimentation delivery to the creek will increase. "If the cobble beds that support Trestles are destabilized through altered sediment delivery, *the resulting impact will likely be irreversible and impossible to mitigate*. While the project proponents may be convinced that there will be no impacts, *we are not convinced and rather expect that the surf break will be substantively degraded over time.*"[215]

The waves at Trestles are one of California's unique and historic natural treasures. If the sediment regime of San Mateo Creek is altered by the Toll Road, the wave formations that make Trestles the "Yosemite of surfing" could be irreparably lost. The irreplaceable value of Trestles as one of the world's greatest surfing resources requires the utmost caution in assessing any potential threat to its continued viability. TCA's assurances that Trestles will not be harmed are not adequately supported. .

TCA's Monetary Offer

Less than two weeks before the scheduled Commission hearing on the Toll Road, TCA announced that it would pay $100 million to "benefit" the state park system if the Toll Road is built.[216] According to TCA, the vast majority of this payment – $70 million – would be used to pay the U.S. Navy to extend its lease with the State for San Onofre after 2021. The remaining $30 million would be used for "improvements to recreational facilities at San Onofre and Crystal Cove State Park," and for "coastal sage scrub restoration within Crystal Cove."[217]

There is simply no merit in TCA's suggestion that the money will mitigate the impacts of the Project. There is no evidence that the State will be forced to pay the Navy to renew the lease for San Onofre, much less the exorbitant sum TCA claims. Nor is there any evidence that the proposed restoration money would create any new recreational facilities or

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[212] *PWA 2006 Report* at 11-12.
[213] *PWA 2007 Analysis* at 2.
[214] *Id*. at 3.
[215] TCA App. 1-4(F) at 3 (PDF p. 8).
[216] TCA App. 11-25.
[217] TCA App. 11-25.

habitat beyond what is already planned by the State. The proposal is merely an offer to finance what will occur with or without the Toll Road. It is not mitigation.

The cornerstone of TCA's monetary offer is a $70 million payment that, according to TCA, would be used to renew the San Onofre lease in 2021. TCA and its supporters have gone so far as to suggest that the continued existence of the park would be in jeopardy without TCA's payment.[218]

But the basic premise behind the offer – TCA's assertion that changes in federal law will compel the Navy to obtain "fair market value" from the State – is faulty. In fact, federal law expressly authorizes the Secretary of the Navy to convey surplus military land for park or conservation purposes *without* charging the fair market value of the property. For example:

- 10 U.S.C. § 2694a authorizes the Secretary of the Navy to convey to a state non-excess property "to be used and maintained for the conservation of natural resources in perpetuity," at a price that takes into account the public benefit of the use of the property for conservation.

- 16 U.S.C. § 667b allows any federal agency to transfer property under its control for "wildlife conservation purposes" to a state wildlife agency "without reimbursement or transfer of funds."

- 40 U.S.C. § 550(e) authorizes the sale or lease of surplus federal lands to a state "for use as a public park or recreation area" at a sale or lease value that accounts for the public benefit of the use of the property.

These provisions are reflected in the General Services Administration's property disposal regulations, which provide that federal property may be disposed of "at up to 100 percent public benefit discount for public benefit purposes," including "park and recreation . . . and wildlife conservation" purposes. 41 C.F.R. § 102-75.350.

Moreover, even if the Navy were to decide in 2021 not to declare the Park surplus property and instead sought fair market value for the lease renewal, there is no indication that this would require payment of more than a nominal rent by the State. It is unlikely the Navy would permit development of private commercial or residential structures within the base, which could conflict with its military mission. Accordingly, the Navy could reasonably determine that the land's highest and best use is retention as open space, and therefore has a low fair market value.

The Navy is also expressly authorized to accept in-kind consideration – including "[m]aintenance, protection, . . . or restoration (including environmental restoration)" – for its market value leases. 16 U.S.C. § 2667(b)(4), (c)(1)(A). The value of these services – which the

[218] Letter from Thomas E. Margro, CEO, TCA, to Maidie Oliveau dated October 8, 2007 (attached as Exhibit 30); Letter from Richard T. Dixon and Peter Herzog to Governor Arnold Schwarzenegger dated October 17, 2007 (attached as Exhibit 31).

State already provides at San Onofre, at no cost to the Navy – could further reduce any monetary rent paid for a market value lease. Indeed, the *annual* budget for maintenance and operations at San Onofre is roughly $2 million.[219] Over a 50-year lease term, the value of this annual in-kind contribution from the State could easily equal or exceed the fair market value of the land even assuming TCA's baseless figure of $70 million.

The most that can be said at this point in time is that the question of whether, when, and on what terms the federal government will convey a future lease, fee or other interest in the San Onofre property to the State is entirely speculative. But even under present federal law, there is nothing that would preclude the long-term operation of San Onofre at little or no cost to the State. Nor is there a shred of evidence to suggest that the state and federal governments would allow San Onofre – after a half century as a state park – to shut down over the issue of land rent. To the contrary, it has always been the clear intent of both the state and federal governments that the land be preserved in perpetuity as park.

Nor does TCA's offer to pay for recreational improvements elsewhere mitigate for the destruction caused by the Toll Road. TCA has suggested that $20 million of its offer could be used to construct recreational improvements at San Onofre or at Crystal Cove. But the State has already constructed or planned for recreational improvements in all appropriate locations in those parks. Providing a subsidy to the state for existing or programmed improvements not only does nothing to mitigate the recreational impacts of the Toll Road, but also does nothing to advance the national interest, because the programs touted by TCA will occur with or without TCA's help.

The only areas within San Onofre suitable for new campsite developments, as identified in the San Onofre General Development Plan, are within Subunit 1 of the Park[220] – the very subunit that the Parks Department concluded would be rendered *incompatible* with recreational use and need to be abandoned if the Toll Road were built. Indeed, the Toll Road would run directly adjacent to – and in some cases *through* – the very areas designated for future campsite development in the Park.[221] As discussed above, the entire Subunit would likely be abandoned if the Toll Road is built, so it offers no opportunity for mitigation.

TCA has also suggested in at least one letter that the Bluffs Campground at San Onofre could be "enhanced" using the funds.[222] But the San Onofre General Development Plan states that the development of Subunit 4 (which includes the Bluffs Campground) is "completed" and "does not recommend any additional camping, day-use parking, or trails."[223] The Bluffs Campground, moreover, is situated in a highly developed location within a few hundred feet of I-

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[219] R. Rozzelle, Orange Coast District Superintendent, California Department of Parks and Recreation (pers. comm. Jan. 10, 2008).
[220] *See* San Onofre State Beach General Development Plan Amendment (March 1984) at 34-36 (attached as Exhibit 26).
[221] *Compare* TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*), figure (PDF p. 236) (showing location of proposed improvements) *with* TCA App. 20/21-49, at Figs. 2.2-5, 2.2-6 (PDF pp. 146-47) (showing Preferred Alternative alignment).
[222] Letter from Thomas E. Margro, CEO, TCA, to Maidie Oliveau dated October 8, 2007 (attached as Exhibit 30).
[223] San Onofre State Beach General Development Plan Amendment (March 1984) at 36 (attached as Exhibit 26).

5; additional campsites at the Bluffs will not even approximate the recreational experience afforded by the San Mateo Campground. In short, there is simply no way to replace at San Onofre the campsites impacted by the Toll Road.

Nor does Crystal Cove – 25 miles to the north of San Onofre – provide an opportunity for mitigation. The Parks Department has planned construction of a 60-site campground on the former site of the El Moro Mobile Home Park at Crystal Cove since at least 1982.[224] Late last year, the Parks Department finally was able to put the project out to bid; according to the California State Contracts Register, responses were due on January 11, 2008.[225] Now that the El Moro Mobile Home Park conversion project is underway, all campsite development called for by the Crystal Cove General Development Plan either has been or soon will be developed, regardless of whether the Toll Road is ever built.

TCA also has proposed that the Parks Department use the money to expand the campground at San Clemente State Beach. This option, however, would require relocation of the Parks Department's Orange Coast District Offices, many of which are currently housed in historic buildings.[226] Furthermore, any new campsites at San Clemente State Beach would be located in an intensively developed urban environment at the edge of I-5, providing future visitors with a recreational experience dramatically different from that offered at the quiet, still-rural San Mateo Campground.[227] Again, mitigation for the loss of San Mateo Campground cannot be measured in a mere number of campsites. As the Parks Department itself has observed, "a certain quantity of recreation facilities . . . should not be forced into an available relocation site at the expense of providing a quality recreation experience or facility."[228] The experience of San Mateo Campground will be irrevocably lost, and TCA has proposed nothing comparable to replace it.

Finally, TCA has suggested that the money could be used to finance the restoration of the historic cottages at Crystal Cove, misleadingly citing the Crystal Cove Alliance (the official Cooperating Association at Crystal Cove) in connection with the proposal.[229] In fact, the Crystal Cove Alliance has condemned TCA's offer: "TCA's proposal is not the right answer for restoring Crystal Cove. We look forward to endorsing a plan that ensures that Californians can reach and enjoy every State Park, intact."[230] Even if the Crystal Cove Alliance had not objected to TCA's offer, restoration of the cottages would not constitute effective

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[224] Crystal Cove State Park General Plan (March 1982) at 43-44 (attached as Exhibit 25).
[225] Department of General Services, California State Contracts Register, available at http://www.cscr.dgs.ca.gov (last visited January 10, 2008).
[226] *See* TCA App. 31/32-57, Comment O25, Ex. 1 (*Parks Dept. Mitigation Assessment*) at 6-7, Appendix B at 4 (PDF pp. 235, 237, 248); *see also* TCA App. 27/30-55, Ex. 9 (California Department of Parks & Recreation, *Relocation Preplanning Letter Report for San Onofre State Beach* (Aug. 1998) ("*Relocation Preplanning Report*") at 2, 5-7 (PDF pp. 156, 159, 161).
[227] *See* TCA App. 27/30-55, Ex. 8 (*Parks Dept. Mitigation Assessment*) at C2-1 (PDF p. 146) (noise analysis describing "long periods of relative quiet" at San Mateo Campground).
[228] TCA App. 27/30-55, Ex. 9 (*Relocation Preplanning Report*) at 8 (PDF p. 162).
[229] TCA, "Toll Road Agency Announces $100 Million Offer to California State Parks" (Sept. 28, 2007), available at http://www.thetollroads.com/home/news_press_sept07a.htm (last visited January 16, 2008).
[230] *See* Crystal Cove Alliance, Press Release, "Crystal Cove Alliance Rejects Toll Authority Offer As Damaging to State Park System" (Oct. 1, 2007) (attached as Exhibit 32).

mitigation for the loss of San Mateo Campground. The 46 cottages at Crystal Cove provide a completely different – and far more expensive – recreational experience than the San Mateo Campground. For example, the Crystal Cove cottages rent for an average of $175 per night for a family of four, while a campsite at San Mateo Campground costs between $20 and $34 per night.[231] In any event, progress on the restoration has been positive and has already generated significant financial support. The cottages likely will be restored with or without the Toll Road.

In short, despite having had years to consider the matter, TCA has never been able to identify any opportunities for creating new recreational facilities comparable to those that would be impacted by the project. TCA's last-minute monetary proposal would do nothing but subsidize the State's existing operations or planned projects. It does not mitigate the Toll Road's impacts, and it does nothing to advance the national interest.

v. The Toll Road Will Permanently and Irrevocably Degrade Irreplaceable Cultural Resources.

The ancient Acjachemen/Juaneño Village of Panhé, located on the banks of San Mateo Creek in San Onofre State Beach, is the ancestral home of the Acjachemen/Juaneño people, whose history in the area dates back 10,000 years. It plays a central role in the people's heritage and is actively used as a ceremonial and burial site.[232] Three of the Tribal Councils of the Juaneño Band of Mission Indians, Acjachemen Nation have adopted resolutions opposing the Toll Road based on the severe and irreparable damage that the Project will cause to the Village of Panhé.[233]

According to State Archaeologists, Panhé was the largest Indian village in this region in prehistoric and early historic times. Today, evidence of the village includes midden deposits, aboriginal artifacts, human burials, relics of houses and fire hearths, other cultural remains, as well as the memory of living Acjachemen people.[234] This site also is listed on the Sacred Lands file at the Native American Heritage Commission[235] and likely qualifies as a Traditional Cultural Property under the federal National Historic Preservation Act. 16 U.S.C. §§

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[231] *Compare* California Department of Parks & Recreation, *News & Views* (Spring 2007) at 6 (attached as Exhibit 33) *with* California Department of Parks & Recreation, *California State Parks Camping Fees* (attached as Exhibit 34).

[232] *See* Juaneño Band of Mission Indians, Acjachemem Nation, Resolution 116, *A Resolution of the Tribal Council Supporting the Protection of Pane and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemen/Juaneño Village of Panhe* (July 10, 2007) (attached as Exhibit 35).

[233] *Id.*; *see also* Juaneño Band of Mission Indians, Acjachemen Nation, *Resolution Supporting the Protection of Panhe and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemen/Juaneño Village of Panhe* (May 19, 2007) (attached as Exhibit 36); Juaneño Band of Mission Indians, Acjachemem Nation, *Resolution Supporting the Protection of Panhe and the Tribe's Full Sovereign Participation in Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemem/Juaneño Village of Panhe* (July 21, 2007) (attached as Exhibit 37) (collectively "*Tribal Council Resolutions*").

[234] Associate State Archeologist Michael Sampson, *Letter to Endangered Habitats League*, Sept. 7, 2007 (attached as Exhibit 38).

[235] *Id*.

470, *et seq*. It is currently one of seven sites included within the San Mateo Archaeological National Register District and is eligible for listing on the National Register of Historic Places.[236]

Portions of the Village and its cultural resources are, according to State Archeologists, within the coastal zone and would be impacted by the Toll Road.[237] The Foothill-South would run adjacent to and through the Village of Panhé and its construction would pass within feet of the village's cemetery and interfere with traditional ceremonial uses.[238] In addition, if the road is built, increased scavenging and damage by relic collectors are anticipated. On February 15, 2006, the Native American Heritage Commission held a public hearing on the Toll Road, and determined – based on testimony from Acjachemen community leaders and tribal members – that the Project would cause severe and irreparable damage to important cultural resources within San Onofre State Beach.[239] Following approval of the Toll Road, the State of California filed a lawsuit against TCA on behalf of the Native American Heritage Commission, challenging the legality of these impacts.

According to TCA's own EIR, there will be "substantial adverse impacts related to archaeological and historic resources that cannot be fully mitigated."[240] Nevertheless, TCA fails to recognize the overwhelming spiritual importance of this area, which is a profoundly sacred site currently used for ceremony, song, and education by the living descendants of the people who once lived there.[241] The Toll Road's impacts on these values will be tremendous, permanent, and impossible to mitigate.[242] In particular, "[t]he known presence of burials at this site elevates its importance beyond any possibility for impact mitigation."[243]

Native Americans who continue to use the Village of Panhé for ceremonial purposes have urged the Native American Heritage Commission to protect this sacred site by continue to prosecute its lawsuit against the Toll Road.[244] As the Native American Heritage Commission itself pointed out in a comment letter to the Secretary on this appeal, TCA has never treated this area as truly sacred. TCA has not only failed to analyze Panhe as a Traditional Cultural Property, but also failed even to provide sufficient information to evaluate all potential

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[236] *See* TCA App. 21/22-50 at 4.16-16 (PDF p. 404); TCA App. 31/32-57, Comment Letter O-26 (PDF pp. 278-81) (from Christopher A. Lobo, Secretary/Treasurer and CEO, Juaneño Band of Mission Indians, Acjachemen Nation, Aug. 6, 2004).
[237] Associate State Archeologist Michael Sampson, *Letter to Endangered Habitats League*, Sept. 7, 2007.
[238] *See* Native American Heritage Commission, *Complaint for Injunctive Relief*, No. 06-GIN051370 (S.D. Super. Ct. filed March 22, 2006) (attached as Exhibit 39).
[239] *Id.*
[240] TCA App. 20-48 at ES-110 (PDF p. 125).
[241] *See Tribal Council Resolutions*; *see also* TCA App. 31/32-57, Comment Letter O-26.
[242] *Id.*
[243] *Id.* at 4.
[244] *See* S. Johnston et al., Juaneño Band of Mission Indians, Letter to L. Myers, Native American Heritage Commission, Re: The traditional village and burial ground of Panhe at San Clemente, California (May 19, 2008) (attached as Exhibit 46); R. Robles, United Coalition to Protect Panhe, Letter to L. Myers, California Native American Heritage Commission, Re: Save Panhe, Save San Onofre, Stop the Toll Road (May 15, 2008) (attached as Exhibit 47).

mitigation options – including selection of an alternative that will avoid this irreplaceable sacred site entirely.[245]

The mitigation measures proposed by TCA will not prevent permanent and irretrievable harm to this sacred site and the surrounding archaeological district. Native Americans have urged every public agency involved in this project – from the Coastal Commission, to the Native American Heritage Commission, to TCA itself – to fairly evaluate and pursue alternatives that will not destroy their sacred lands. TCA has failed to do so.

vi. The Toll Road's Overall Impact on Water Quality Will Be Overwhelmingly Negative.

TCA's briefing here simply ignores the voluminous evidence presented to the Commission concerning the Toll Road's tremendous negative impacts on a uniquely sensitive coastal watershed. Instead, TCA focuses exclusively on a few treatment facilities along I-5 that will do nothing to ameliorate the impacts of the Toll Road itself. Indeed, the water quality "benefits" touted by TCA are not unique to or dependent upon the Toll Road, and could be implemented as part of an alternative or required independently as a condition of Caltrans' water quality permits.

The San Mateo watershed is one of the healthiest watersheds remaining in Southern California, with San Mateo Creek being the last undammed and undiverted major drainage basin south of Ventura.[246] The Toll Road would cut, fill and pave over miles of "the core of the relatively less-disturbed and naturally functioning portions of the San Mateo watershed."[247] This includes 12 subwatersheds that drain into the tributary Cristianitos Creek (five of which are within the undisturbed Donna O'Neil Land Conservancy), and eight that drain to the lower San Mateo Creek mainstem, immediately upstream of Trestles.[248] Water from these subwatersheds ultimately reaches that portion of San Mateo Creek within the coastal zone, including the lagoon, estuary, and Trestles.[249] Thus, Toll Road-related disturbances both within the coastal zone, and in the subwatersheds upstream of the coastal zone, will impact coastal resources. *All* of the activities causing these disturbances, therefore, must be considered in evaluating the Toll Road's consistency with the CZMA. 16 U.S.C. § 1456(c)(3)(A); *see also Millennium Pipeline*, 424 F. Supp. 2d at 177-78.

The construction of the Toll Road through the steep, natural terrain of the San Mateo watershed will result in massive changes to the hydrology of the subwatershed drainages, causing stream destabilization and a significant increase in erosion and sediment production.[250] The Toll Road would require 41 million yards of cut and fill. This will create 530 acres of wide

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[245] *See* Larry Myers, Native American Heritage Commission, Letter to T. Street, NOAA, Re: Comments: Foothill Transportation Corridor South (FTC-S) Toll Road (May 27, 2008) at 3.
[246] *Spencer Conservation Priorities* at 36.
[247] *PWA 2006 Report* at 13.
[248] *Id*. at 2, 15-17 (Figs. 5-7), 21.
[249] *Id.* at 2, 4 (Fig. 1).
[250] *Id.* at 13.

exposed cut and fill slopes and add over 136 acres of impervious surface within the San Mateo Creek watershed alone.[251]

Before the Commission, TCA sought to minimize the severity of these impacts by comparing the area of disturbance caused by the Project against the entire 136 square mile San Mateo Creek watershed, and concluding that the change in peak runoff *for the watershed as a whole* would be less than 3%.[252] But this approach masks the enormous impacts of the Toll Road on the 20 subwatersheds within and just upstream of the coastal zone.[253] These sand and silt dominated watersheds and related stream systems have developed in equilibrium with the existing rainfall-runoff dynamics. They are fragile and prone to instability and rapid degradation with relatively minor changes in runoff patterns caused by changes in land use.[254] The erosion impact to a stream channel is exponentially proportional to the percentage of upstream watershed that is impermeable or disturbed.[255] The Project's disturbance (i.e., cut and fill) limits would occupy over 40% on average (and up to 100% in some cases) of the upstream land area of the eight subwatersheds closest to the creek mouth.[256] Impermeable surfaces would cover up to 29% of the upstream area of individual subwatersheds.[257] These are very large percentages.[258] Impacts on this level are associated with destabilization of canyons, highly altered hydrology, and severe erosion.[259] Erosion and siltation impacts therefore could affect the ecology of the San Mateo Creek mouth and lagoon.[260]

TCA maintains that it has modeled the projected runoff flows and that there will be "virtually no change" at the discharge points.[261] However, the flow duration plots are misleading: they actually represent only the discrete discharge from the flow splitters and EDBs for *onsite* highway runoff – i.e., runoff from the roadway itself. *The modeling does not address offsite flows.*[262] By examining hydrologic modeling results only at the discharge of specific BMPs, the total impacts associated with the entire project including the "offsite" and "onsite" runoff management strategies cannot be determined.[263]

TCA assumes that adjacent slopes will be "stabilized" with native vegetation.[264] However, typical BMPs that may be appropriate in an already developed urban or suburban

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[251] TCA App. 1-4(F) at 2 (PDF p. 7).
[252] *PWA 2006 Report* at 2.
[253] *See* TCA App. 1-4(E), Table 1 (PDF p. 4). .
[254] TCA App. 1-4(F) at 2 (PDF p. 7)
[255] TCA App. 1-4(E) at 1, 2.
[256] *See id.* at 3 & Revised Table 1; *see also PWA 2007 Analysis* at 3; *PWA 2006 Report* at 2, 16-17 (figs. 6-7), 18 (Table 1).
[257]TCA App. 1-4(E).
[258] *PWA 2006 Report* at 12.
[259] *PWA 2007 Analysis* at 3; *PWA 2006 Report at 1, 21.*
[260] *Id.*
[261] TCA Response at 81.
[262] PWA Letter of Jan. 22, 2008 at 6
[263] *Id.* (emphasis added).
[264] TCA Response at 85.

environment are not adequate protect the undeveloped fragile canyons and steep terrain along San Mateo Creek and Cristianitos Creek from erosion.[265]

The cut and fill slopes are extensive including about 530 acres of disturbed land with cuts as wide as 700 to 800 feet from the highway and up to 250 feet high.[266] As one expert testified at the hearing, this is the size of a 20-story building.[267] The RMP does not provide a detailed description of how these large cut and fill slopes will be stabilized. It relies on source control BMPs including: hydroseeding, ground cover, mulch, longitudinal ditches, down drains, all of which are, at best, only moderately effective. Establishing native vegetation through hydroseeding will be difficult, particularly given the steep slopes, top soil removal, and variable local rainfall patterns.[268] As the Commission noted in its Staff Report, the TCA experienced slope failures in connection with the San Joaquin Hills Transportation Corridor, including 10 feet deep cuts in a 35 acre area "stabilized" through revegetation. By comparison, the Foothill South requires revegetation to stabilize about *530 acres* of cut and fill slopes.[269] TCA's assumption that revegetation will be 100% effective is simply implausible.

Moreover, *the RMP does not propose any treatment control BMPs* either to control runoff flow rates and volumes or to trap sediments eroded from offsite (i.e., non-road) areas. Without any treatment control BMPs, delivery of fine grained sediments to San Mateo Creek will increase from the cut and fill slopes and runoff discharge.[270]

TCA's inability to demonstrate that that the Toll Road will not significantly increase sedimentation to San Mateo Creek is confirmed by Regional Water Quality Control Board's recent denial of TCA's application for a water quality certification for the Project under the Clean Water Act. TCA's assertion that the denial was without prejudice misses the point. *See* TCA Reply at 11. The basis for the denial was that, *based on the same information TCA presented to the Commission*, the Board was unable to conclude that the BMPs and other mitigation measures proposed by TCA would avoid adverse impacts on the uniquely important beneficial uses present in San Mateo Creek.[271] Specifically, the Board found that "the RMP does not protect [beneficial uses] in developing specific management measures for work in areas occupied by threatened and endangered species," expressed lingering concerns with TCA's conclusions regarding the effectiveness of extended detention basins in reducing pollutant load, and concluded that the RMP as revised in 2007 "was not adequate to demonstrate that the project would not cause degradation of receiving waters."[272] TCA has offered nothing new in this proceeding to address these deficiencies – which lie at the heart of the Toll Road's negative water quality impacts.

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[265] PWA Jan. 22, 2008 letter at 2.
[266] *Id.* at 4.
[267] TCA App. 3-7 at 140 (PDF p. 147).
[268] *Id.*
[269] *Id.*
[270] *Id.*
[271] *See* J.H. Robertus, Regional Water Quality Control Board, Letter to R. Beck, RBF Consulting, Re: South Orange County Transportation Infrastructure Improvement Project Foothill-South Toll Road (Feb. 6, 2008) (attached as Exhibit 42).
[272] *Id.* at 5-6.

Ignoring the evidence that the Toll Road will have a tremendous adverse impact on water quality, TCA embarks on a tortured effort to portray the Project as having a net "benefit" to water quality. Indeed, TCA's briefs here focus exclusively on its proposal to construct water treatment facilities along the existing I-5. The I-5, however, crosses only a *single* subwatershed within the San Mateo Creek watershed, over a distance of less than half a mile. In contrast, the Toll Road would run approximately seven miles through *20* largely undisturbed subwatersheds of San Mateo Creek.[273] It is this massive *new* disturbance in one of the last high-integrity watersheds anywhere in Southern California that poses the real threat to water quality, not the existing I-5. Indeed, there is no evidence of any significant water quality problem in the Creek today.[274]

Moreover, the purported reductions in pollutants account only for discharges generated on the roadways themselves. As discussed above, increases in sedimentation caused by the Toll Road's project's massive cut and fill slopes present a major water quality issue – one that is not addressed at all by the proposed I-5 retrofit.

Even the purported reductions in roadway runoff are questionable. The treatment measures proposed by TCA are not entirely effective at removing pollutants. Based on recent Caltrans numbers, between 42 and 50% of the copper, 10 to 28% of the suspended sediment, and 13 to 28% of the lead washed from the proposed Toll Road would be discharged to San Mateo Creek *after* treatment.[275] TCA provides calculations purporting to show that, despite the addition of these pollutants, building the I-5 retrofit would result in a net decrease in total pollutant loadings from roadway runoff. But these calculations assume unrealistic reduction efficiencies. According to a recent Caltrans BMP Pilot Study, sand filters are prone to clogging and are recommended only for small impervious watersheds such as park and ride lots. TCA is proposing sand filters for watersheds of up to *65 acres*, far greater than recommended. And extended detention basins have lower and much more variable removal rates than sand filters – as low as 40% for total suspended solids. Using realistic assumptions, the discharges from the Toll Road surface alone would likely be greater than any reductions achieved by the I-5 retrofit.

In any event, providing new treatment facilities for the I-5 in no way depends on the construction of the Toll Road. Such facilities can be constructed as part of any alternative to the Toll Road (including the AIP-R alternative described in Section IV.A.3, below). Moreover, contrary to TCA's assertions, Caltrans *can* be legally required to install treatment facilities on existing portions of I-5 by the Regional Water Quality Control Board as a condition of the agency's own stormwater discharge permit, to the extent runoff is ever found to be causing a violation of a water quality standard.[276] In addition, according to staff at the San Diego Water

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[273] *PWA 2006 Report* at 15, Figure 5, *Subbasins Disturbed within the San Mateo Creek Watershed.*
[274] No water bodies at San Onofre have been identified by the Regional Board as impaired. *See* San Diego Regional Water Quality Control Board, *2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments* (attached as Exhibit 40).
[275] PWA, Letter of Jan. 22, 2008 at 9-10.
[276] *See* State Water Resources Control Board, *Caltrans Stormwater Permit*, Section C.1-1 at 10 ("[t]he discharge of storm water from a facility or activity that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs) is prohibited") (attached as Exhibit 41).

Board, Caltrans' existing permit already requires the installation of the very measures offered by TCA in the event that *any* improvements are made to the affected segment of I-5. The Caltrans Stormwater Permit explicitly requires "Storm Water Drainage System Retrofitting." Specifically, "Caltrans shall seek opportunities to retrofit the Storm Water Drainage System for water quality improvement *whenever a section of the rights-of-way undergoes significant construction or reconstruction."*[277]

There is no basis for TCA's assertion that building a 16-mile Toll Road through some of the most sensitive habitat in Southern California, including a popular state park, is somehow necessary to improve water quality along a stretch of I-5 that currently suffers from no demonstrated water quality problem. The Toll Road will increase fine sediments in the creek system and the lagoon, significantly reduce water quality, and threaten two endangered fish species. A few new water treatment facilities along I-5 – facilities that are not unique to, and that do not require, this project – cannot possibly offset these adverse impacts.

b. The Toll Road's Negligible Contribution to the National Interest Does Not Outweigh these Severe Impacts.

The Toll Road's contribution to any relevant national interest is negligible at best. As discussed in Section IV.A.1, above, TCA has failed to provide any evidence that the Toll Road will contribute to the development of the coastal zone. Nor has TCA shown that the Toll Road project is coastal-dependent; accordingly, TCA has not proved that the Toll Road will further any national interest in the orderly siting of coastal-dependent transportation facilities. TCA also has attempted to describe its ineffective and partial recreational access and water quality mitigation measures as benefits that should weigh in the national interest calculus. These measures, however, fall far short of compensating for – and thus do not outweigh – the Toll Road's severe adverse impacts. In short, TCA has not identified a single national interest articulated in the CZMA that even comes close to outweighing the Toll Road's numerous severe and unmitigable impacts on the coastal zone.

TCA instead relies largely on the Toll Road's contribution to purported areas of the "national interest" that are *not* articulated in the CZMA: military security, evacuation during a nuclear disaster or fire, and air quality. Whatever the importance of these interests might be in the abstract, they are not articulated in the CZMA, and thus have no place in the Secretary's balancing analysis in an appeal under the CZMA. *Chevron I*, 1990 NOAA LEXIS 47 at *126-27. TCA essentially invites the Secretary to exceed both his statutory authority and the confines of his prior decisions under the CZMA – an invitation the Secretary should decline.

Even if these interests could be considered in the balancing analysis under Element 2, the Toll Road's contribution to these interests would be insufficient to overcome the project's coastal impacts. To the extent that they are truly necessary for national security, TCA's proposed "improvements" to Camp Pendleton could be accomplished with or without the Toll Road, either by the military itself or as part of the other alternatives analyzed as part of the

[277] *Id*. at 15 (emphasis added); *see also* State Water Quality Control Board, *Fact Sheet for National Pollutant Discharge Elimination System for Storm Water Discharges* (July 15, 1999) (attached as Exhibit 41).

SOCTIIP process. As previously discussed, TCA lacks the statutory authority to use its toll or fee revenues to construct the improvements, so ultimately, the Navy would be paying for the improvements regardless of who constructs them.

Under any of these possible scenarios, the Toll Road is unnecessary for and makes no contribution to the purported national security improvements, much less a contribution sufficient to outweigh the Toll Road's negative effects.

TCA's claim that the Toll Road will improve public safety by providing an alternative evacuation route in the event of a fire or nuclear disaster is equally specious. TCA makes much of the obvious point that increased road capacity may speed evacuation, but nowhere demonstrates that this particular Toll Road project is necessary for this purpose. As discussed in Section IV.A.3, below, there are a number of reasonable, available alternatives under consideration that also would increase capacity, and thus achieve the same generalized benefit TCA claims for the Toll Road.

TCA also fails to recognize that the Toll Road, as currently proposed, is expected to *increase* the risk of wildland fire – a risk explicitly discussed in the FWS's Biological Opinion for the project:

> Roadways provide a ready source for fire ignitions in adjoining native habitat by means of vehicle sparks, discarded cigarettes, and access for arsonists. For example, along the already built northern section of the proposed toll road, a series of four fires have burned the majority of the surrounding open space since 1996. Only one of these fires was directly attributed to operation of the toll road, but the great majority of the recent fires in the area have resulted from human activity.[278]

Far from providing a safety benefit, the Toll Road would actually *create* a major new source of ignitions in fire-prone wildlands.

New highways in brush areas do far more harm than good with respect to wildfires. Roads are a major source of fire ignitions, due to sparks from catalytic converters, accidents, equipment malfunctions, discarded cigarettes, and other factors. According to one of the world's leading fire ecologists, Dr. Jon E. Keeley of the US Geological Survey and UCLA:

> In southern California several studies have shown that *fires are overwhelmingly tied to roads*. In many parts of the region a map of where fires ignite is often nearly a carbon copy of a road map . . . It is a well established fact that when new roads are established they bring with them a greatly increased incidence of fires.[279]

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[278] *See* TCA Supp. App. 6-50 at 21; *see also id.* at 162 (discussing impacts of fire on Pacific pocket mouse).
[279] TCA App. 1-4(J) at 1 (PDF p. 1) (emphasis added).

Data supplied to the Commission showing fire starts in the Cleveland National Forest in San Diego County – an area with scrub vegetation analogous to that surrounding the Toll Road – demonstrates ignitions heavily clustered along the route of Interstate 8.[280]

Moreover, a highway will generally act as a firebreak only in moderate weather conditions; "under the weather conditions that lead to our most destructive fires, *roads and even major highways seldom act as a barrier to fire spread*."[281] Indeed, the example cited by TCA of the 241 acting as a fire break during the 2007 Santiago fire is belied by the fact that the fire jumped the 241 several times during that event.[282]

The overwhelming historic evidence points to greatly increased fire incidence due to roads like the Toll Road.[283] Various mitigation measures – fencing, signage in construction sites, fuel modification, call boxes – are in standard use elsewhere and yet roads remain a major source of wildfire ignitions.[284] Building new roads through wildlands is simply not a fire prevention strategy. The way to stop fires is to not start them in the first place. The Toll Road will have the opposite effect. In the words of a trained wildland firefighter, "while firefighting resources can certainly use the toll road, the increased fire risk the road brings to the landscape is not an acceptable trade off."[285]

In sum, TCA has failed to carry its burden of proving that the Toll Road's negligible contribution to the national interest overall – and its even more paltry contribution to the relevant national interests articulated in the CZMA – even comes close to outweighing the Toll Road's devastating impacts on endangered species, coastal recreation, water quality and watershed stability, irreplaceable cultural resources, and wetlands. TCA's appeal must be denied on this element alone.

3. <u>Element 3</u>: The Commission Properly Determined That Several Reasonable Alternatives Were Available To TCA That Would Accomplish Project Objectives Consistent With California's Coastal Management Program.

The Secretary should uphold the Commission's objection because "[t]here is [a] reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program." 15 C.F.R. § 930.121(c). The Commission identified with specificity several such alternatives, including improving I-5

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[280] TCA App. 1-4(I) (PDF p. 19).
[281] TCA App. 1-4(J) at 1 (PDF p. 1) (emphasis added).
[282] The OC Sheriff website, November 9, 2007, http://blog.ocsd.org/post/Santiago-Fire---Evacuating-James-A-Musick-correctional-facility.aspx; Orange County Fire Authority website, http://www.ocfa.org/pages/ocfa.asp?filename=canyonfiremap.asp (Santiago incident map).
[283] "New Maps Emphasize The Human Factor In Wildfire Management," *Science Daily*, University of Wisconsin-Madison (Dec. 28, 2006), http://www.sciencedaily.com/releases/2006/11/061116081859.htm.
[284] "TCA's argument that the toll road would provide access to firefighters, might act as a fire break, and would include mitigation measures such as warning signs and call boxes, does not mitigate the increased fire risk the road would cause." TCA App. 1-4(I) at 2 (PDF p. 18).
[285] *Id.*

with carpool lanes and expanding local arterials, which would achieve project objectives as well or better than the TCA's preferred route. These alternatives are technically feasible and could be built with only a fraction of the adverse impacts claimed by TCA. These alternatives also are eligible for funding and federal approval under existing programs. The existence of these reasonable, available alternatives precludes an override of the Commission's objection here.

a. The Commission Identified Alternatives That Avoid Coastal Impacts While Achieving Project Purposes.

An alternative "consists of one or more changes to the project that would allow the project, albeit in a somewhat different form, to achieve its primary purpose in a manner consistent with the state's coastal management program." *Millennium Pipeline*, 2003 NOAA LEXIS 17 at * 45. The primary purpose of the Toll Road is to relieve traffic congestion on I-5 and arterial roadways in southern Orange County.[286] Reasonable, available alternatives exist that can accomplish the primary purpose of the SOCTIIP project.

Foremost among these alternatives is the AIP-R alternative developed by the nationally renowned transportation planning and engineering firm Smart Mobility, Inc. TCA's own analysis of the traffic benefits of an alternative called the AIP alternative – which is functionally identical for traffic purposes to the AIP-R alternative – demonstrated performance equal to or better than TCA's preferred Toll Road alternative in reducing projected delays on I-5 and nearby arterials, and in reducing total vehicle hours traveled.[287] The CC-ALPV alternative considered as part of the SOCTIIP project also showed improvements in these conditions; if combined with limited improvements to the I-5, its performance could be dramatically improved.[288]

b. The Commission Identified Alternatives that are Consistent with the State's Management Plan, Specific, Available, and Reasonable.

The Secretary has developed a four-part test for determining whether an alternative is reasonable: (1) consistency with the state's coastal management program; (2) specificity; (3) availability; and (4) reasonableness. *Millennium Pipeline*, 2003 NOAA LEXIS 17 at *49. "The burden of proof for the first two criteria rests with the state. The burden then shifts to the appellant [] to demonstrate that the alternative is either unavailable or unreasonable." *Id.*

The Commission's analysis rejecting TCA's consistency certification application satisfies each element of this test.

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[286] *See* TCA App. 20/21-49 at 1-15 to 1-17 (PDF pp. 40-42).

[287] See Smart Mobility, Inc., *An Alternative to the Proposed Foothill South Tollroad: The Refined AIP Alternative; Design Modifications to Reduce Displacements* (January 2008) at 3-4 ("*Revised Smart Mobility 2008 Study*") (attached as Exhibit 45).

[288] *See* Smart Mobility, Inc., *Alternatives to the Foothill South Tollroad* (May 24, 2008) at 20 ("*Alternatives Report*") (attached as Exhibit 3).

i. Alternatives Specifically Identified By the Commission Would Be Consistent with California's Coastal Management Program.

The Secretary's past decisions make clear that "'[s]ufficient specificity' is satisfied if an alternative is identified with enough details to permit a further evaluation of the alternative's reasonableness and availability." *Millennium Pipeline*, 2003 NOAA LEXIS 17 at *50. The record developed before the Commission easily meets this standard.

In its consistency objection, the Commission specifically identified six alternatives (three involving improvements to I-5 and arterial streets and three involving alternate toll-road routes). In doing so, it relied on detailed descriptions and analyses submitted into the record, including a detailed description and analysis of the AIP-R developed by Smart Mobility.[289] The record before the Commission also clearly indicates that these alternatives largely avoid the Coastal Zone and are far less environmentally damaging than the Toll Road proposal.[290] Based on this record, the Commission concluded that these alternatives, "if adopted by the applicant, would permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the CCMP."[291]

ii. The TCA Cannot Meet Its Burden To Show That Alternatives Identified By The Commission Are Not "Available."

TCA protests that the AIP-R alternative, which would include adding a high-occupancy vehicle ("HOV") lane to portions of I-5, is "unavailable" because of difficulty in implementation and lack of funding. TCA sums up its position by quoting the Director of Caltrans, who stated at the Commission hearing that the cost of the AIP alternative "is $2.5 billion, which we do not have." TCA Br. at 45. However, there is absolutely no credible evidentiary support for either the purported cost of the AIP alternative or the non-existence of funding sources.

TCA's cost figures for the AIP and related alternatives are based on its wildly inflated and completely unsupported estimate of the number of residential and commercial structures that would be necessary for that alternative. As shown in the January 2008 Smart Mobility Report on the AIP-R alternative and discussed in the following subsection, design modifications could reduce property takings – by far the most significant cost associated with this alternative – by approximately 95%.[292] Although final engineering study would need to be conducted, Smart Mobility concluded that these modifications could reduce the cost of the AIP-R alternative on the order of a *billion* dollars as compared to TCA's AIP alternative.[293]

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[289] *See* TCA App. 1-2 at 117-127.
[290] *Id.* at 124; *see also* TCA App. 21-22-50 at 4.15-3, 4.15-4 (PDF pp. 379-80) (CC-ALPV alternative is not in coastal zone and has no impacts on coastal zone).
[291] TCA App. 1-1 at 1.
[292] *Revised Smart Mobility 2008 Study* at 34.
[293] *Id.*

It is also disingenuous for TCA to claim that no funds for the AIP alternative are "programmed." Such funds would not be programmed unless and until TCA and Caltrans decide to pursue that alterative. The question is not whether funds have been "programmed," but whether such funds can be made available. TCA provides no evidence to show that the AIP stands in any different position with regard to funding than the numerous other highway widening projects that have been and are currently being undertaken by Caltrans in Orange County and throughout the State.

Indeed, TCA *has not even tried* to tap readily available sources of funding and special federal programs that could serve to facilitate the approval, funding and construction of this and other alternatives *by TCA*. Its failure to pursue these and other options precludes TCA from persuasively carrying its burden to show that these alternatives are "unavailable."

For example, Section 1604(b) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU), Pub. L. No. 109-59 (Aug. 10, 2005), authorizes the Secretary of Transportation (Secretary) to carry out 15 demonstration projects to permit States, *public authorities, or public or private entities designated by States*, the authority to collect a toll from a motor vehicle on an eligible toll facility. Known as the Express Lanes Demonstration (ELD) program, it is a new pilot program that permits tolling on selected new and existing Interstate lanes to manage high levels of congestion, reduce emissions in an air quality nonattainment or maintenance area, or finance added Interstate lanes for the purpose of reducing congestion. Its scope is broad: *The ELD program permits tolling on any newly constructed Interstate or non-Interstate lanes.* In addition, existing Interstate or non-Interstate facilities that are modified or constructed to create toll lanes are eligible to collect tolls on the entire facility. Additionally, existing Interstate or non-Interstate HOV facilities are eligible to collect tolls on the entire facility.

This provision was enacted into law well before TCA approved its preferred Toll Road alternative in 2006. Moreover, the Department of Transportation has been actively soliciting applications for this program for several months. *See* Federal Highway Admin., *Express Lanes Demonstration Program*, 73 Fed. Reg. 6549 (February 4, 2008). No reason exists why the TCA, either on its own or in partnership with the Orange County Transportation Authority and/or CalTrans, could not seek approval to implement an alternative under this special authorization. *But TCA has not even tried to submit an application.*

TCA's willful failure to pursue opportunities such as the ELD program points to the real reason why funding for an alternative is not yet available: TCA simply does not want funding for anything other than its preferred project. As a result, the often-lengthy process through which transportation projects are prioritized for federal, state and local funding has not commenced. But this is the fault of the applicant, not an indication that alternatives cannot be funded.

Even if funding is difficult to obtain, that does not mean a project alternative is "unavailable." Alternatives acknowledged to be "extremely difficult, if not impossible to secure," "time consuming (taking potentially up to four years to complete)," "expensive," or

"uncertain," nonetheless have been found reasonable by the Secretary.[294] Moreover, the need for agreement with a third party will not make an alternative unavailable if there is an established process to obtain the necessary approval. *Millennium Pipeline*, 2003 NOAA LEXIS 17 at *63, n.97. Here, funding is neither "extremely difficult" nor "impossible" to secure. On the contrary, there is an "established process" underway – the Federal Highway Administration is soliciting applications for projects right now. Nor has TCA identified any reason why a set of I-5 improvements that incorporated tolled lanes (for example, the AIP-R) would be any more time consuming or uncertain than the Toll Road, which has yet to be approved by federal agencies and depends on the sale of bonds in an uncertain market. In short, there are several "established processes" to gain the necessary approval, and the necessary funding, for this type of approach. What is missing is TCA's willingness to pursue them.

TCA could use the Express Lanes Demonstration Project as a source of funding to construct a less environmentally damaging alternative to the Toll Road. Yet TCA has not attempted to do so. Because TCA has failed to show why this or other more traditional sources of highway funding cannot be obtained, it has not met its burden to show that alternatives are "unavailable," and its appeal should be denied.

iii. The TCA Cannot Meet Its Burden To Show That Alternatives Identified By The Commission Are Unreasonable.

Reasonableness has been defined as "a weighing of the differences in environmental impacts and cost between the alternative and the proposed project." *Islander East* at 45. It is TCA's burden to demonstrate the unreasonableness of the alternatives identified by the Commission. *Millennium Pipeline*, 2003 NOAA LEXIS 17 at *49.

Here, TCA cannot meet its burden because its assessment of the relative costs and benefits of the route it chose versus the alternatives identified by the Commission is fundamentally flawed. For example, the purported benefits of the Toll Road are grossly overstated, and the true costs of the alternatives are grossly inflated.

These flaws were identified and analyzed in detail by Smart Mobility and others in proceedings before the Commission.[295] These shortcomings are further summarized in the new Smart Mobility Alternatives Report.[296] They include:

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[294] *See Millennium Pipeline*, 2003 NOAA LEXIS 17 at *59-60; *see also Consistency Appeal of Chevron U.S.A.*, 1990 NOAA LEXIS 47 (Oct. 29, 1990) (requiring oil company to obtain emission offsets and on-site emission reductions as reasonable alternatives to proposed exploratory oil and gas drilling rejected as inconsistent based on violations of Clean Air Act). In addition, alternatives do not need to "be immediately available to the appellant." *Millennium Pipeline*, 2003 NOAA LEXIS 17 at *63, n. 97 (citing *Consistency Appeal of Exxon Co., U.S.A.*, 1984 NOAA LEXIS 15 (Nov. 14, 1984)).

[295] *See* TCA App. 2-6(E) at 35-41 (PDF pp. 36-42); *see also Revised Smart Mobility 2008 Study* ((attached as Exhibit 45); *see also* TCA App. 1-4(K) (PDF pp. 2-9) (peer review of Smart Mobility Report), 1-4(M) (PDF pp. 1-7) (Smart Mobility responses to Caltrans comments).

[296] *Alternatives Report* at 2-3.

- Only a few alternatives considered by TCA during the SOCTIIP process were refined to avoid impacts, while most of the others were not. This results in unequal treatment, and therefore, comparisons between the refined and unrefined alternatives are meaningless.
- There were several major flaws in the transportation modeling used to measure the performance of the alternatives. These flaws serve to overstate the congestion relief benefits of the proposed toll road, and to overstate impacts for the alternatives that included improvements to the I-5 corridor (I-5, AIP and CC alternatives).
- The allocation of construction costs and property impacts was improperly allocated. The alternatives that included improving the I-5 corridor double counted construction costs and property impacts, as there are already other interchange improvement projects underway for these locations. In other cases, improvements are needed with or without the toll road, so the impacts should not be attributed to the toll road alternatives.
- Several alternatives were rejected due to lack of a funding source, which is not an appropriate reason for a project that is still in the conceptual design stage. Funding for projects is generally not identified until much later in the planning and design process.
- HOT lanes, which could provide an important source of funds for the alternatives that include I-5 improvements, were rejected prematurely and improperly. The TCA's own analysis shows that HOT lanes are even more effective at relieving congestion on I-5 (the project's major purpose) than the HOV lanes (as in the AIP Alternative) or the toll road.

By failing to compare the costs and benefits of the various SOCTIIP alternatives in an accurate, unbiased, and meaningful manner, TCA has made it impossible for the Secretary to "weigh . . . the differences in environmental impacts and cost between the alternative and the proposed project." *Islander East* at 45. It necessarily follows that TCA did not meet its burden to show that the alternatives identified by the Commission do not favorably compare with its chosen route.

Even if TCA had not failed to conduct a fair and unbiased analysis, TCA would still not have met its burden here, because the preponderance of the evidence before the Secretary affirmatively shows that reasonable alternatives to the tollroad project in fact exist. These include the AIP-R alternative developed by Smart Mobility and the CC-ALPV alternative as modified in Smart Mobility's Alternatives Report.

As for the AIP-R, the TCA continues to insist that the AIP-R alternative cannot be built without displacing 1,300 existing homes and businesses. This fabrication is premised on a footprint intended to maximize displacements – one that TCA has never backed up with any adequate study or analysis. In fact, Smart Mobility demonstrated that up to 95% of takings estimated by TCA along the AIP could be avoided. Moreover, after the former directors of

highway design for both the New York State Department of Transportation and the New York State Thruway conducted a detailed review and site tour, they concluded that:

> Smart Mobility makes a strong case that ***improvements could be made by TCA to the AIP alternative that have solid potential to greatly reduce the displacement of people and businesses while at the same time preserving its operational benefits***. Their concepts for the various improvements are enhanced by the fact that they build off of traffic information, constraints, and opportunities already presented by TCA in the SEIR and related documents.[297]

TCA has simply never demonstrated that this fundamental conclusion is wrong.

Instead, TCA makes much of the fact that Smart Mobility did not solve every single engineering constraint along every foot and at each interchange of this multi-mile project and did not provide engineering-level specifications. But Smart Mobility did provide specific conceptual solutions to reduce displacement impacts – solutions that neither TCA nor Caltrans has ever fairly considered in detail as applied to this project. These include such "value engineering" techniques as retaining walls, alignment adjustments and innovative interchange designs that Caltrans *regularly* employs when improving highways in other developed areas of the state.[298] TCA has failed to provide any justification for its implicit position that Southern Orange County is somehow unique, or that similar value engineering will not be equally effective there.

TCA cites a March 24, 2008 Caltrans letter critiquing the January 2008 Smart Mobility report as evidence that the AIP-R is not "reasonable." *See* TCA Br. at 44. The letter concurs with Smart Mobility that design revisions could help avoid displacement impacts.[299] But it characterizes certain aspects of the conceptual design "as not meeting Department standards" and "not meeting applicable engineering standards of care."[300] This critiques are entirely misplaced. The Smart Mobility alternative was never intended to serve as an engineering-level study.[301]

Moreover, Caltrans' insistence on rigid consistency with full design standards here – even when following those standards will result in massive residential and business displacements – stands in stark contrast with its approval of non-standard highway and interchange designs elsewhere in Southern California. For example, as described in the Smart Mobility Alternatives Report and in Smart Mobility's response to the Caltrans letter, Caltrans itself has not rigidly adhered to design standards, but has considered and approved non-standard

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[297] TCA App. 1-4(K) at 3 (PDF p. 4).
[298] *See Alternatives Report* at 2-6.
[299] *See* Smart Mobility, Inc., Memorandum to M. Fitts, Endangered Habitats League, Re: Response to Caltrans Letter of March 24, 2008 (May 28, 2008) ("*SMI Caltrans Response*") (attached as Exhibit 48); see also TCA Supp. App. 1-1 at 2. The Caltrans letter rejects these design revisions on the assumption that they will not adequately handle traffic. *See id.* These objections, however, rely on assumptions about traffic modeling that has not yet been done – modeling that only TCA and Caltrans have the capacity to do. *SMI Caltrans Response* at 1, 3.
[300] TCA App. 10-22 at 1; see also TCA Supp. App. 1-1.
[301] *SMI Caltrans Response* at 3.

design solutions in other contexts where necessary to avoid community and property impacts.[302] Just by way of example, Caltrans has shifted the centerline of I-5 in Los Angeles County as part of a "value engineering" process to avoid the substantial property impacts that would have occurred had Caltrans followed its initial design concepts.[303] Caltrans also worked with the City of San Clemente to explore non-standard alternative designs for the Avenida Pico interchange on I-5 – designs that avoided displacements while providing adequate traffic and safety performance.[304]

Caltrans' inconsistency on the issue of standards may arise from the fact that it is not a neutral party in this project. Its position is affected by its entry into a "Cooperative Agreement" with TCA 15 years ago that legally binds Caltrans to "support" the Toll Road project.[305] Section 2.1.6(a) of the Cooperative Agreement states that the "STATE shall use its best efforts to use its discretionary power to support PROJECT."[306] "STATE" is defined in Section 4.28 as Caltrans, and PROJECT is defined in Section 4.21 and Recital 2 as a road connecting the SR 241 to the I-5 "in San Diego County."[307] The only toll road alternatives that link the existing SR 241 to I-5 *in San Diego County* are the alternatives that run through San Onofre State Beach. In effect, therefore, Caltrans committed in 1993 to support an alternative that would run through the park.

Caltrans' commitment goes beyond mere support for this limited range of alternatives. Specifically, Caltrans contractually committed to

> *exercise all discretionary authority under applicable law* to persuade [*sic*] *other governmental* or private entities, indirectly or directly, from constructing, operating, permitting, assisting or supporting any STATE highway Capital Projects or improvements, realignments or enhancements of STATE highway projects within the Non-Competition Zone.[308]

In other words, the agreement effectively binds Caltrans to *oppose* any alternative – including reasonable and feasible non-toll road alternatives required to be objectively considered under CEQA, NEPA, the California Coastal Act, the CZMA, and other laws – that Caltrans itself would be responsible for implementing, including the I-5 widening, AIP, and AIO alternatives. This leaves Caltrans in the position of supporting only alternatives that run through San Onofre State Beach – and opposing a wide range of alternatives that could avoid devastating impacts in the coastal zone within the state park.

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[302] *See id.* at 2, 3 (discussing non-standard "interim" improvements and Ortega Highway interchange).
[303] Alternatives Report at 2-3.
[304] Id. at 6.
[305] *See* TCA App. 17-32(Q) ("Cooperative Agreement").
[306] *Id.* at 10 (PDF p. 13).
[307] *Id.* at 1, 30, 31 (PDF pp. 4, 33, 34).
[308] Cooperative Agreement § 2.1.6(b) (emphasis added), TCA App. 17-32(Q) at 10 (PDF p. 13). The Non-Competition Zone, in turn, is an area running 5-miles on either side of TCA's chosen route for the Tollroad through the State Park, an area clearly mapped 15 years ago appearing at Exhibit 2 of the 1993 Cooperative Agreement. Notably, the route shown on this map is virtually identical to the route ultimately chosen by TCA 15 years later, as to which Caltrans says there is no other alternative.

This commitment was made years before the commencement of environmental review under NEPA and CEQA, the SOCTIIP Collaborative process, or the CZMA certification process. All of Caltrans' comments on the various alternatives considered in those processes were framed in light of these contractual commitments to support an alternative effectively chosen by TCA 15 years ago.

In sum, TCA cannot rely on its own failure to analyze SOCTIIP alternatives fully and fairly to demonstrate that those alternatives are now unavailable and unreasonable. The Commission and the public are not required literally to design a highway to construction-ready standards in order to present a reasonable alternative. Rather, the Commission must describe the *reasonably available* potential of such an alternative to meet project needs consistent with Coastal Zone Management Act policies. The evidence presented has more than accomplished that task, and TCA has failed to negate it.

For this independent reason, the TCA has not met its burden and its appeal should be denied.

B. Ground II: The Toll Road Is Not Necessary in the Interest of National Security.

TCA cursorily argues in its opening brief that the Secretary should override the Commission's objection because the Toll Road is necessary in the interest of national security. TCA Br. at 47; 16 U.S.C. § 1456(c)(3)(A). The argument – which TCA wisely abandons it its reply – has absolutely no merit.

In order to override a state's objection on Ground II, the Secretary must find that "a national defense or other national security interest would be *significantly impaired* were the activity not permitted to go forward *as proposed*." 15 C.F.R. § 930.122 (emphasis added); *see also Millennium Pipeline*, 2003 NOAA LEXIS 17 at *79-80. The Secretary has observed that "this appeal standard is very stringent and very difficult to meet," and that "[t]he regulation establishing the criteria for an override based on Ground II sets up a very difficult test." *Chevron I*, 1990 NOAA LEXIS 47 at *166, 168.

As previously discussed, the "improvements" at Camp Pendleton that TCA has touted in this proceeding were never part of the stated purpose and need for the Toll Road project. TCA also may lack the legal authority to construct these facilities on Camp Pendleton; nowhere in the California statutes governing TCA's operations is there any suggestion that the agency's finances can be used to build gates and overpasses for the sole benefit of a federal military installation in a neighboring county. TCA's attempt to cobble together a national security rationale for its project at this late date smacks of contrivance.

The only other evidence cited by TCA in support of its argument on Ground II is a wildly speculative assertion that an alternate route to the Marines' embarkation point at March Air Force Base "would be vital in the even of catastrophic loss to the southern Base exit points when Marine forces are being deployed to overseas bases" or to Twentynine Palms. TCA Br. at

47. TCA does not attempt to define what might cause such a "catastrophic loss" to only the southern access points to the Base, and does not indicate how likely such a mysterious and undefined event might be. In short, TCA's argument rests on a vague speculation that some combination of unspecified and unlikely circumstances might make the Toll Road desirable for access to the Base at some unknown point. This is a far cry from proving, based on a preponderance of the evidence, that the national defense or another national security interest will be significantly impaired if the project is not carried out as proposed. *See* 15 C.F.R. § 129.122.

The one citation to the record in this section of TCA's brief references a single sentence in the agency's CEQA findings of fact and statement of overriding considerations for the Toll Road.[309] This sentence does not discuss the need for alternative access to the Base in the event of possible catastrophes, but rather the more mundane effect on Base access associated with congestion on I-5.[310] Of course, as with so many other putative "benefits" of the Toll Road, other alternatives could improve routine access for the Marines (along with every other driver on I-5) by reducing congestion. Again, TCA offers no evidence to support its claim that national security will be significantly impaired if the Toll Road is not built in exactly this location.

Finally – and most egregiously – TCA simply omits any discussion of the *negative* impacts that the Toll Road will have on Camp Pendleton. If the Toll Road is built "as proposed," the Base will suffer a number of adverse impacts, including an increased threat to base security, disruption of nighttime training activities due to roadway lighting, and the permanent loss of several hundred acres of land that otherwise could have been used to support the mission of the Marines.[311] TCA itself has concluded that the impacts associated with temporary and permanent loss of this land will remain significant even after mitigation.[312] Accordingly, it is no surprise that the Navy has fought bitterly to keep the Toll Road from encroaching even further into Camp Pendleton, as the voluminous correspondence between TCA and the Base – correspondence disclosed by TCA in other proceedings, but omitted from TCA's briefing and Appendix here – conclusively demonstrates.[313] Indeed, it is building the Toll Road "as proposed" – not refraining from building it, or building it elsewhere – that genuinely threatens a significant impairment of the national defense here.

TCA's argument on Ground II thus not only lacks any factual or legal basis, but also lacks the virtue of basic candor and honesty. The Secretary should soundly reject TCA's disingenuous claim that the Toll Road – a project that TCA itself has admitted will cause great harm to Camp Pendleton – as somehow necessary to national security.

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[309] *See* TCA App. 18-37 at 15 (PDF p. 91).
[310] *Id.*
[311] *See* TCA App. 22/23-51 at 4.21-13 to 4.21-21, 4.21-118 (PDF pp. 233-41, 338).
[312] TCA App. 24-52 at 7-43, 7.22-213 (PDF pp. 412, 585).
[313] *See generally* Exhibit 2 (letters discussing encroachment impacts and objecting to TCA alternatives that would extend further into Camp Pendleton).

V. Conclusion

The Commission properly objected to TCA's consistency certification for the Toll Road. TCA has failed to meet its burden of demonstrating that the Toll Road is nonetheless consistent with the CZMA or necessary to national security. The Secretary should reject TCA's appeal.

Very truly yours,

Joel Reynolds
Senior Attorney
Director, Urban Program
Natural Resources Defense Council

Elizabeth Goldstein
President
California State Parks Foundation

Susan Jordan
Director
California Coastal Protection Network

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Audubon California

Garry Brown
Executive Director
Orange County Coastkeeper

Serje Dedina
Executive Director
WiLDCOAST-COSTASALVAjE

Encl. Exhibits 1-45 (submitted via hand delivery under separate cover)
Exhibits 46-50 (submitted concurrently herewith via email)

EXHIBIT 28

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August 31, 2007

Mr. Mark Rouscher,
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Subject: Orange County Toll Road – Comments on Skelly Reports
PWA Reference #: 1815.01

Dear Mark,

This letter summarizes PWA's assessment of prior studies on the potential effects of the Orange County Toll Road (OCTR) on the Trestles surfing area (Trestles). These comments are based primarily on the review of key reports prepared for the Transportation Corridor Agencies (TCA)[1,2], and by PWA[3].

The TCA reports cited herein generally conclude that the OCTR will not have a significant effect on Trestles because the OCTR will not have a significant impact on the discharge of water, sediment or pollutants. This conclusion is developed partly by reliance on a number of other studies by the TCA team. The PWA report raises questions whether the TCA findings are correct and whether sufficient analysis has been accomplished to assess the effects of the OCTR. The most important disagreements are listed below:

1. Watershed Impacts – Sediment Delivery: The OCTR is likely to have a significant adverse effect on lower San Mateo Creek because it impacts an average of about 40% of the areas of the eight lower subwatersheds on the west side of San Mateo Creek (immediately upstream from Trestles). While detention basins are proposed to limit runoff and catch pollutants, PWA has raised the concern that

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[1] Skelly Engineering, April 3,2000, *Final Report, Impacts of Foothill Transportation Corridor – South on Surfing Resources*, Letter report to Transportation Corridor Agencies, 13 pp.

[2] GeoSoils, Incorporated, April 5, 2006, Letter to RBF Consulting, *Additional Discussion of Surfing Resources in the Vicinity of San Mateo Creek and Potential Impacts of the Proposed Toll Road, Orange County, California*, 5 pp.

[3] PWA, January 11, 2006, *Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area, Final Report,*" Prepared for Surfrider Foundation, 25 pp.

these subwatersheds are likely to be de-stabilized, resulting in increased fine sediment delivery to San Mateo Creek and the lagoon.

2. Direct Impacts to Creek - The proposed OCTR junction with I-5 is located directly over San Mateo Creek and is likely to affect the ecology and morphology of the area during construction and possibly thereafter.

3. Watershed Impacts – Water Quality: Since the watershed is largely undisturbed in the vicinity of the proposed OCTR, water quality detention facilities would need to be extremely effective in trapping pollutants to avoid degrading water quality in the Creek. PWA questions whether this is likely to be achieved and therefore disagrees that water quality impacts are insignificant.

4. Mouth Impacts – Sediment Delivery: Both TCA and PWA reports acknowledge that Trestles is located at the mouth of San Mateo Creek and is therefore likely to be influenced by sediment delivery from San Mateo Creek. As with many California systems, sediment delivery to the shore is episodic, being delivered in relatively large slugs during periods of strong rainfall runoff. The discharges include sediment yield from lesser rainfall events that has accumulated in the lower reaches of the creek. The discharged sediment is then redistributed along the shore and nearshore over time by incident wave action. There may also be long-term responses to any changes in sediment yield. The statement by Geosoils (2006) that the OCTR impacts will be small because the impacts only occur when the mouth is open does not consider the time that discharged sediments are re-worked by waves, and sediment supply effects on mouth morphology.

5. Lagoon Impacts: Increased fine sediment delivery may accumulate in the lagoon at the creek mouth, changing its ecology over time.

6. Cobble Transport: Cobble transport can be greatly affected by the amount of finer sediment resident within the sediment deposit. Under wave action, increased porosity (absence of finer sediments) can result in cobbles moving onshore, while a lack of porosity resulting from the presence of smaller sediment can result in offshore movement (PWA, 2006). The TCA conclusion that cobble transport will not be affected because the OCTR will be located in a silty part of the watershed (Geosoils, 2006) ignores the effect of finer sediments on coarse sediment transport and may be incorrect. Therefore, impacts to cobble transport are potentially significant and unmitigated.

7. Sediment Transport Analysis – TCA studies of sediment delivery are based on the presumption that changes in water discharge are small because the paved area will be small relative to the total watershed area. PWA notes that the impact to eight subwatersheds near the mouth will be around 40%

by area on average, which is much greater than the 10% to 25% threshold for destabilization of channels. Actual flowrates have not been measured, and the post-project watershed discharges have not been modeled. This level of analysis leaves too much uncertainty in the effects of the proposed project and is not sufficient to gauge the likely effects of the OCTR on sediment delivery. Therefore, impacts to sediment transport are potentially significant and unmitigated.

8. Surf break sensitivity to sand discharge – PWA interviewed several local surfers who are knowledgeable of the surfing conditions at Trestles. It is their observation that sand supply affects the surf break quality and is an important consideration. PWA finds this observation to be logical and consistent with many California coastal locations. In contrast, the TCA consultant concludes that "The toll road will have no long term impact or cumulative impacts on the surfing resources because the project does not impact the delivery of cobbles to the delta." Therefore, impacts to the surfing resource due to changes in sand transport changes are potentially significant and the effects are unmitigated.

In summary, we are concerned that the project may have a significant adverse effect on water and sediment delivery and therefore could adversely affect the geomorphology and ecology of the lower reaches of the Creek. Water quality may also be impacted, even with the proposed Best Management Practices described by the TCA. Areas that could be affected include the lagoon, creek mouth and nearshore area (and associated surfing conditions in the area known as Trestles). There is a high degree of uncertainty associated with the TCA analyses including the individual items 1 through 8, above, and the aggregate effect of these items. Also, given the unique and highly valued surfing resource that is Trestles, we recommend careful and more complete study prior to moving forward with the project. The scope of these studies is an important consideration, and we recommend that the scope be developed with input from the surfing and broader technical communities. It is unlikely that significant adverse effects to Trestles could be mitigated. The TCA studies do not provide a sufficient basis to move forward with the project.

Simply put, the toll road and associated earthwork cut and fill and drainage changes could destabilize steep canyon-like subwatersheds. Resulting erosion would worsen water quality and change the sediment deposition that supports the famous waves. Once this damage is done, it may not be reparable.

Sincerely,
PHILIP WILLIAMS & ASSOCIATES, LTD.

Bob Battalio, PE
Principal

EXHIBIT 17

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January 11, 2006

Mark Rauscher
Surfrider Foundation
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San Clemente, CA 92674

Re: Transmittal of "Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area, Final Report"

Dear Mark,

Please find attached an electronic version (PDF) of "Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology, and Trestles Surfing Area, Final Report."

We have enjoyed working on this project and hope you are pleased with the final report. Please don't hesitate to contact me with any questions.

Sincerely,
PHILIP WILLIAMS & ASSOCIATES

for Bob Battalio
Principal

Cc: Bill White (Shute, Mihaly & Weinberger LLP), Dan Silver (Endangered Habitats League)

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FINAL REPORT

POTENTIAL TOLL ROAD IMPACTS ON SAN MATEO CREEK WATERSHED PROCESSES, MOUTH MORPHOLOGY AND TRESTLES SURFING AREA

Prepared for

The Surfrider Foundation

Prepared by

Philip Williams & Associates, Ltd.

January 11th 2006

PWA REF. # 1815.00

Services provided pursuant to this Agreement are intended solely for the use and benefit of The Surfrider Foundation.

No other person or entity shall be entitled to rely on the services, opinions, recommendations, plans or specifications provided pursuant to this agreement without the express written consent of Philip Williams & Associates, Ltd., 720 California Street, 6th Floor, San Francisco, CA 94108.

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1. INTRODUCTION

This report addresses the adequacy of the recently published EIS/SEIR and various related documents prepared by the Project Sponsor in describing the potential impacts of the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) (referred to as the "Toll Road") on the hydrologic processes in the San Mateo Creek watershed, and Trestles surfing area at the creek mouth. Philip Williams & Associates (PWA) has been retained by The Surfrider Foundation to assess the potential for the SOCTIIP to affect sediment issues, water quality and surfing conditions at Trestles. Potential impacts of concern include changes in the watershed leading to local or regional stream destabilization and change, and alterations of the sediment delivery regime. Such changes could have significant impacts at various local and regional scales, and possibly alter the morphology of Trestles (and its surfing characteristics), as well as result in water quality impacts.

PWA staff have reviewed the EIS/SEIR, the SOCTIIP Hydrology Technical Report (PSOMAS, 2003a), the Sediment Continuity Analysis (Boop and Cleary-Milan, 2004) and the Skelly Engineering TCA Surfing Resources Study (2000), and conducted a field reconnaissance of San Mateo Creek at its mouth, along the proposed road alignment through the main San Mateo Creek valley, and in the Donna O'Neil Land Conservancy. We provide a brief review of these reports as they relate to the Trestles surfing area.

This report focuses on potential impacts in the San Mateo Watershed. While comparable concerns may exist in the San Juan Creek watershed, they are not addressed here.

2. SUMMARY & CONCLUSIONS

Trestles surfing area is an internationally-significant recreational resource that lies adjacent to the proposed project area. Its significance is a function of the high quality and consistency of its waves, which is controlled by the dynamics of the lagoon - beach barrier - delta system at the mouth of San Mateo Creek. It is believed that Trestles beach and surfing dynamics are sensitive to the supply of cobbles and sand. The exact relationship between surfing conditions and sediment delivery is not fully understood, and represents a significant omission in the EIS/SEIR.

The SOCTIIP EIS/SEIR indicates that the proposed project will have less than significant effects on Trestles surfing area because a) the predicted net change in peak runoff will be less than 3% for the watershed as a whole, and b) sediment supply in San Mateo Creek is believed to be transport-limited and thus unlikely to be affected by changes in watershed sediment supply. PWA's review of the EIS/SEIR questions the focus on conclusions drawn at the entire watershed scale, and the relatively low importance the EIS/SEIR attaches to impacts at the sub-watershed scale. The twenty sub-watersheds closest to Trestles that the proposed road alignment crosses will be impacted to a much greater extent than the average figure in the EIS/SEIR for the entire 136 square mile San Mateo Creek watershed implies. For example, the limits of cut and fill occupy as much as 100% of individual sub-watersheds and increase the impermeable area of up to 29%. The cut and fill limits of the road in the Donna O'Neil Land Conservancy will occupy on average 47% of each sub-watershed, while along the west valley side of San Mateo Creek the disturbance limits will occupy on average 43% of each watershed. Disturbance of this magnitude has been shown to cause severe erosion and channel geomorphic degradation in other parts of Orange and San Diego Counties, including sites along the proposed alignment that have been visited as part of this review. Previous studies have shown that increases in impermeable area of 10% cause severe degradation of aquatic resources in watersheds, with increases of 25% rendering creeks unrestorable downstream.

A particular concern with the proposed project is that increased erosion in sand and silt dominated sub-watersheds close to the mouth of San Mateo Creek could increase the proportion of fine to medium texture sediment relative to the cobbles that appear to sustain Trestles, potentially impacting the surfing area and the lagoon habitats. An increase in fine-medium sediment delivery from the watershed could result in a reduction in coarse sediment delivery to Trestles even in the current transport-limited condition of San Mateo Creek.

Our review of the EIS/SEIR also finds that the proposed runoff management and sediment control measures are unlikely to control runoff of fine sediment from the road cut and fill areas during events such as the 2-year flow which contribute the majority of sediment in most watersheds. These events will exceed the planned capacity of the sediment settling basins, allowing fine sediment to reach the stream system, the lagoon habitat and Trestles. Increased fine sediment delivery and deposition in the lagoon could degrade water quality.

3. THE RELATIONSHIP BETWEEN TRESTLES SURFING AREA AND THE SAN MATEO CREEK WATERSHED

3.1 CONCEPTUAL MODEL OF TRESTLES SURFING AREA

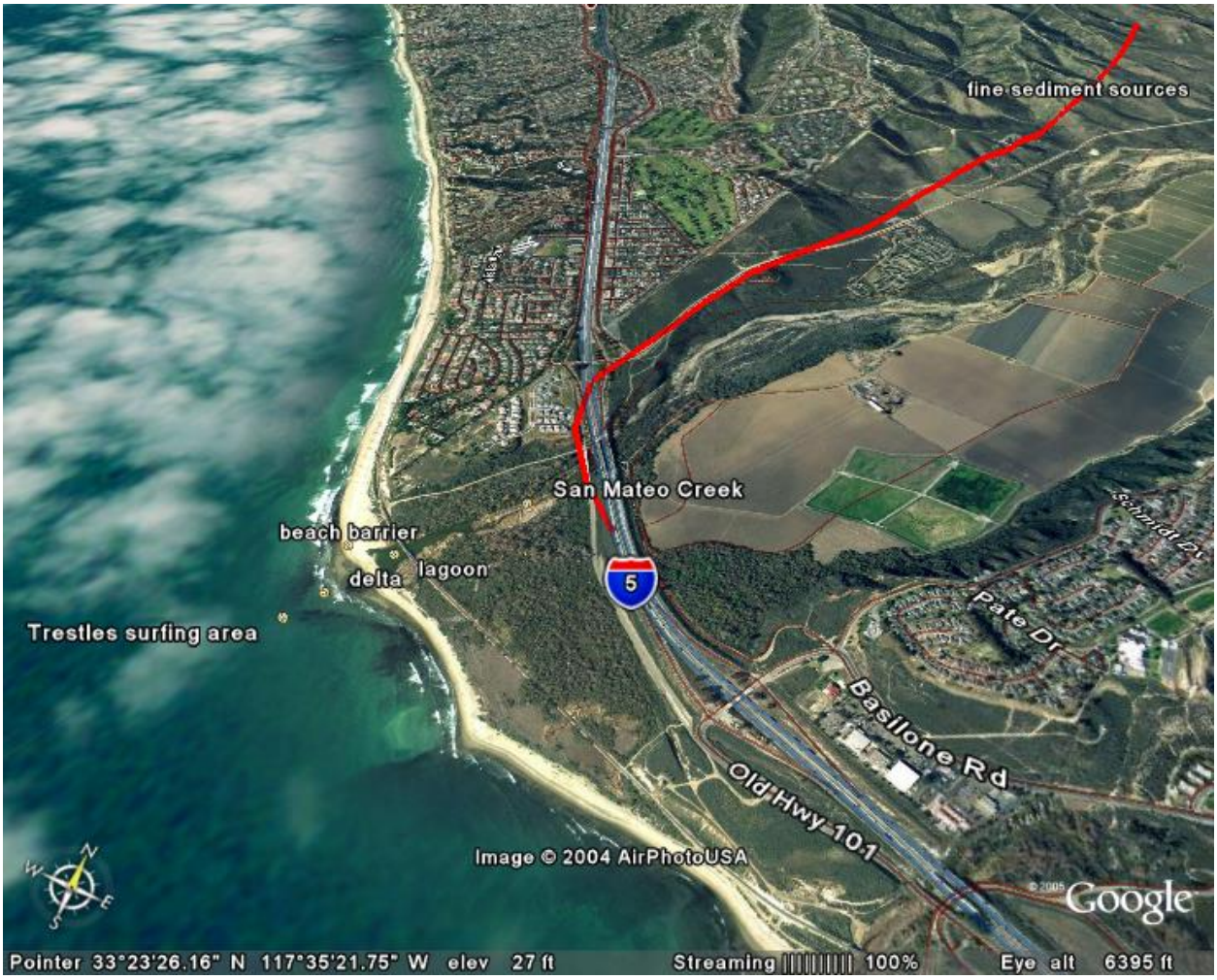
3.1.1 Description of the Surfing Resource

The world renowned Trestles surf spots are located in the vicinity of the mouth of San Mateo Creek. There are four main surf breaks associated with San Mateo Point and the river mouth deposits. The general location of Trestles relative to San Mateo Creek and the toll road is depicted in Figure 1 while the particular surf spots are shown in more detail in Figure 2. Santa Catalina and San Clemente Islands partially shelter this region from northwest swells however west and southwest swells approach with little hindrance. The apex of Uppers is located immediately southwest of the creek mouth which generally breaks best on a northwest swell where waves peel around the point to the south. On large swells, continuous waves can peel all the way into the small embayment separating Uppers from Lowers. Lowers is located at the smaller point southeast of Uppers. Lowers can pick up both northwest and west/southwest swells although is best for surfing on a southwest swell. There is both a left and a right at Lowers – the right peels wide from the apex of the point in a southeastwardly direction while the left peels a little tighter from the apex in a more northeastwardly direction. The two remaining main surf breaks, Cottons Point and Church, are located on the periphery of San Mateo Point. Cottons Point, located north of Uppers, is a deep water left best on bigger southern swells. In contrast, Church, a submerged rock point south of Lowers, breaks best on a northwest swell.

Surfers have been riding waves off San Mateo Point since the sport came to California and the quality of the wave has remained consistently good over the years (pers. comm. Jerry Collamer). It is truly a versatile surfing environment as the exposure and form of San Mateo Point provide a wide range of conditions for surfers to choose from depending on swell direction, board preferences, and style. On any given swell, the crowd in the water is a testament to Trestles' recreationally unique quality and diversity of wave types.

3.1.2 Morphologic Setting of the Coast

The coastline in the vicinity of San Mateo Point and Trestles is generally characterized by relatively narrow, semi-continuous sandy beaches backed by wave-cut seacliffs (Inman and Masters, 1991). The continental shelf adjacent to San Mateo Point is narrow and slopes gradually to the southwest to depths of 262 feet (Inman and Masters, 1991). Recent geophysical surveys of the ocean floor conducted for the San Clemente Shoreline Feasibility Study show that sandy silts and silty sands blanket the shelf with a very thin veneer. Bedrock surfaces can be encountered four to ten feet below littoral deposits one mile seawards of the beach and in many places are exposed (USACE, 2004b). The surveys also pick up a number of bedrock spurs, the largest being the seaward extension of San Mateo Point, that can rise as much as 18 feet above the surrounding ocean floor (USACE, 2004b). As shown in Figures 3, the general



Source: image from GoogleEarth 2005

figure **1**

Toll Road Effects on Trestles Surfing Area

Trestles Surf Spot Relative to Proposed Toll Road

PWA Ref# 1815.00

PWA

Source: image from GoogleEarth (2005)

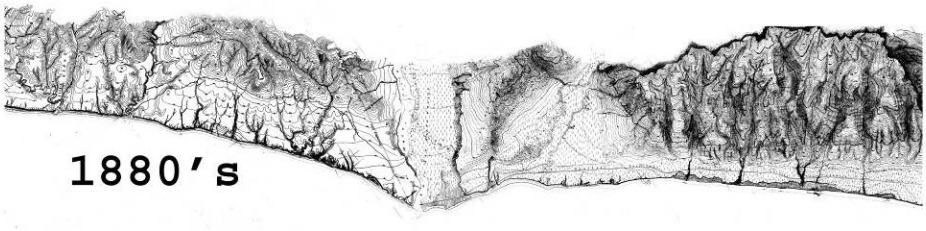
figure **2**

Toll Road Effects on Trestles Surfing Area

Trestles Surf Spots

PWA Ref# 1815

PWA



TOPOGRAPHY

2005

1934

HYDROGRAPHY

1972

Source: U.S. Coast and Geodetic Survey, 1886, 1889, 1934,1934,1972

f igure **3**

Toll Road Effects on Trestles Surfing Area

Historic Topography and Hydrography of San Mateo Point

PWA Ref# 1815.00

PWA

form of San Mateo Point has changed little between the late 1800's and the present. The same is true for the adjacent nearshore area between 1935 and 1972, as also depicted in Figure 3. when the topographic survey was taken and between 1935 and 1972 when the hydrographic surveys were conducted. The predominance of relatively stable, resistant bedrock features offshore and to the north and south of the river valley and cobble-boulder deposits have most likely enabled the persistence of the point and the consistency of the surf. Skelly (2000) provides an interpretation of aerial photos of San Mateo Point from 1932 to the present which implies a lot of shoreline movement but persistent points at Uppers and Lowers. The report, however, is not adequate to gauge the accuracy of the interpretation.

San Mateo Creek currently discharges to the ocean at the northern margin of a narrow river valley bounded by the resistant headlands which form San Mateo Point. A small lagoon and marsh exist in the low gradient nearshore, behind the active beach. Under natural conditions, prior to construction of the railroad for which the surf spot is named, the creek mouth most likely migrated between the north and south valley walls (Skelly, 2000). Construction of the railroad trestles, upstream agricultural fields and the Interstate-5 have restricted San Mateo Creek to its present discharge location along the northern margin. A sand barrier blocks discharge of suspended sediments from San Mateo Creek from entering the ocean except during very large discharge events. When flows in the creek are great enough, the sand barrier is breached temporarily (for weeks to a month – pers comm. Zachary Ponsen) and the creek flow discharges directly to the ocean, where sediments are temporarily deposited and reworked in the surf zone. Cobbles, structured in the form of a fan, extend from the mouth of San Mateo Creek. This feature extends to just north of Cottons Point and to south of Uppers surf spot. A similar, smaller fan-shaped feature extends from the smaller point where Lowers surf spot is located. Per accounts from long-time Trestles surfers, the cobble bed extending seawards from approximately MLW, has remained a relatively stable feature as long as they can remember. Published literature provides very little discussion of the origin of this characteristic.

3.1.3 Sediment Budgets and Littoral Transport

San Mateo Point forms the southern boundary of the northernmost sub-cell in the Oceanside littoral cell. Littoral cells are portions of the coast within which sediment is circulated. They are bounded by features that naturally deflect the longshore transport of sediments offshore and out of active shore-parallel transport. Although littoral cells may "leak" a portion of sediment, they can be thought of as independent confined systems, each with their own sediment budget. The Oceanside littoral cell extends approximately 56 miles from Dana Point to Point La Jolla. It can be split up into three sub-cells: 1) Dana Point to San Mateo Point; 2) San Mateo Point to Carlsbad Submarine Canyon; and 3) Carlsbad Submarine Canyon to Point La Jolla. The sediment budget and dynamics of the surf zone, while dictated by the amount and type of yield from local sources, hydrography and wave energy, can also play a role in determining how waves propagate and break onshore. There have been a number of littoral transport studies conducted for the US Army Corps of Engineers Coast of California Storm and Tidal Waves Study including, Hales (1978), Weggel et al. (1983), Sonu (1988), and Everts (1990). Inman and Masters provide a summary and synthesis of information presented in previous reports in their "Budget of Sediment and Prediction of the Future State of the Coast" (Inman and Masters, 1991).

Sand and gravel are delivered to the north sub-cell of the Oceanside littoral cell via San Juan Creek, San Mateo Creek and bluff erosion. Most studies assume that there is no longshore transport past Dana Point, the northern cell boundary. Sediment is lost from the north sub-cell via longshore transport to the south within both the surf zone and along the shorerise (seawards of the surf zone where the shelf slope increases in a typical shore face profile) and through downwelling of sediments to depths greater than that of closure. Closure depth, or the maximum depth of seasonal changes, is about 33 feet in the Oceanside littoral cell and generally corresponds to the landward boundary of the shorerise. Inman and Masters (1991) note that erosion occurring during storm cluster episodes extends to depths in excess of 49 feet. Replacement of eroded material following such storm clusters back into the surf zone is thus dependent on the ability of wave energy to push eroded sediments up and over the slope of the shorerise. The shorerise within the Oceanside littoral cell is relatively steep and wave energy is not generally strong enough to replace sediments lost to such depths. Thus, severe storm clusters probably result in irreversible erosion in the surf zone and on the shorerise of the Oceanside littoral cell and accretion seawards of the shorerise (Inman and Masters, 1991).

Sediment budgets were assessed in three periods punctuated by changes in the wave climate. Under natural conditions (1900 – 1938), prior to upstream dam construction on tributary rivers, sediment inputs and outputs to the sub-cells were generally in equilibrium (Inman and Masters, 1991). Between 1960 and 1978, a period characterized by a mild, uniform northwesterly wave climate and north – south longshore transport, the yield of sediment from streams decreased due to construction of dams but bluff erosion increased due to urbanization. In the north sub-cell, inputs exceeded outputs and a widening of the beaches was observed. Beginning in the 1980's, the wave climate became more variable as the vicinity received much more wave energy from the west and southwest, creating a more northward littoral transport. The net longshore transport was not in one direction but rather the north and south components were nearly equal. The north subcell experienced net accretion (Inman and Masters, 1991). In general, gross transport (sum of northward and southward longshore transport components) is much greater than the net transport (difference). Accretion has continued in the north subcell of the Oceanside littoral cell even though fluvial inputs have most likely decreased. Inman and Masters (1991) hypothesize that this accretion has persisted due to the supplementation of the natural sediment budget by increased bluff erosion.

3.1.4 Dependence of Surf Quality on Morphology of the Mouth

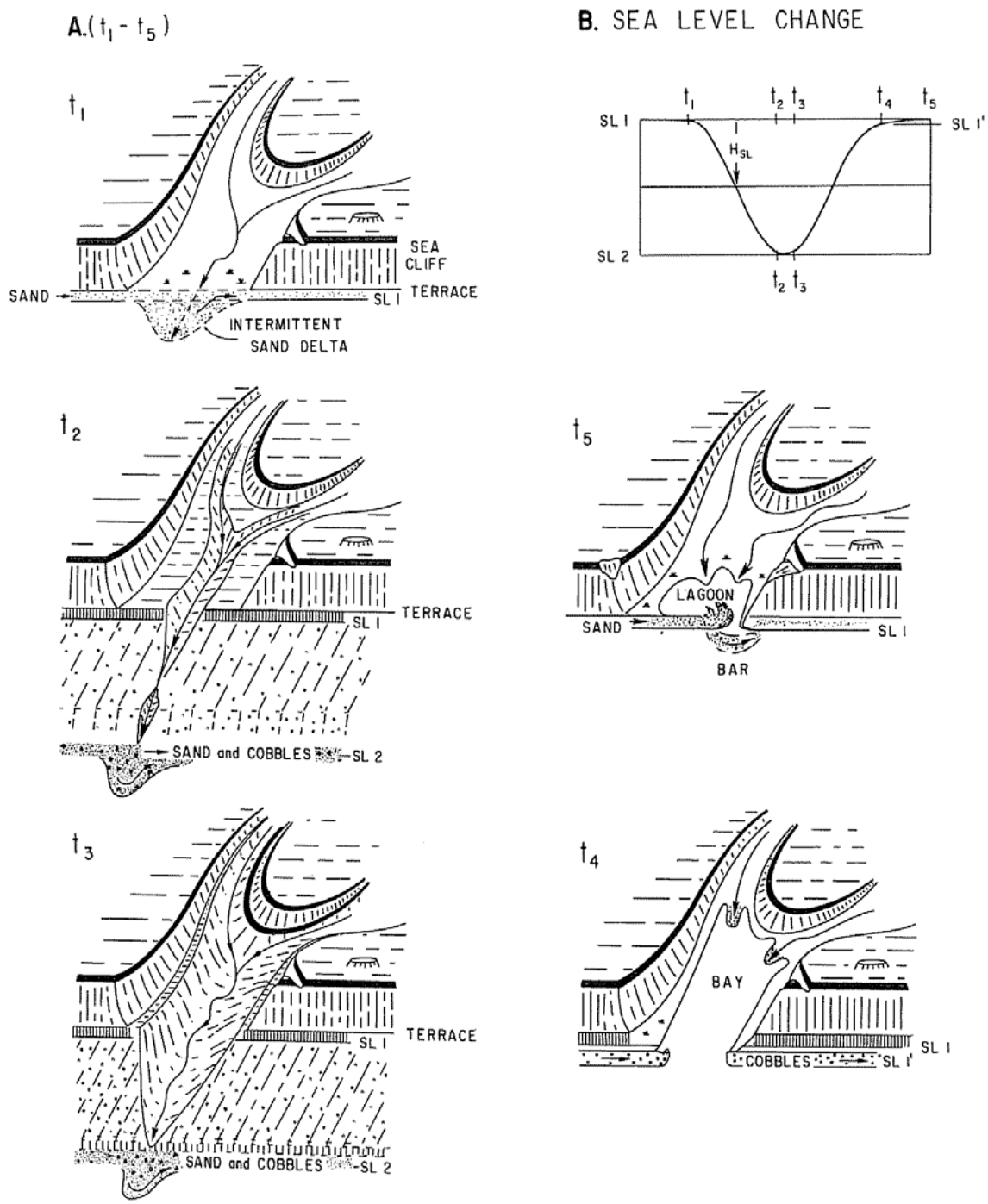
It is said by long-time surfers of the area that Trestles is consistently good when the incident swell is favorable (typically, favorable swell is characterized by coherent, organized mid to long period wave trains of average or larger size, incident from preferred direction(s), with favorable local winds). Some surfers have said that following the breach of the barrier, the surf at Uppers can be at its best (pers. comm. Zachary Ponsen). During large storms when the barrier is breached, a large volume of sand is discharged to the surf zone where it is quickly reworked offshore to form bars. Per accounts from surfers, the sand never blankets the cobble at the outlet due to energy in the surf zone but rather forms an ephemeral offshore bar extending southward from the mouth of the creek. These temporary sand features, which

enhance the quality of a certain type of wave, are dependent upon the episodic delivery of large volumes of sand to the creek mouth.

Because the surf at Trestles is said to be consistently good by long-time surfers, it is implied that the quality of the waves is more dependent on stable bathymetric features such as the cobble fan, than on the episodic, ephemeral deliveries of sands from the creek. While these surges in sandy sediment within the surf zone can temporarily enhance a certain type of wave, they do not seem to be wholly responsible for the excellence of the surf spot. Published littoral transport studies primarily focus on sand transport (Hales (1978), Weggel et al. (1983), Sonu (1988), Everts (1990) and Inman and Masters (1991)). There is little published discussion of the nature of the cobble concentrated at the mouth of San Mateo Creek and interspersed throughout the sand layers in the intermittent stretches of beach. Skelly (2000) notes that the deltas around San Mateo Point are formed by cobbles and boulders derived from the watershed and transported to the surf zone as bedload in San Mateo Creek. He characterizes the features as relatively immobile and intermittently covered by sand. Although possible, there are no citations or studies to support this. In addition, Skelly (2000) claims that the amount of large cobbles transported via San Mateo Creek as bedload will not be affected by construction of the toll road although this conclusion is made without justification. Without studies confirming the morphologic nature of the cobble formation, it is difficult to assess what impacts the toll road will have on the fan-shaped cobble feature near the mouth of San Mateo Creek.

Knowledge of the morphology of the cobbles is pertinent in assessing the impacts that the toll road will have on Trestles as a surfing resource. Cobbles have been observed in the stream bed but their past or present transport dynamics have not been studied in detail. It is speculation that the cobble feature could have been formed by any or a combination of three processes including: 1) historic or active transport via San Mateo Creek as bedload during high flows and deposition at the creek mouth, 2) historic or active littoral transport south from eroding alluvial bluffs, discharges of the San Juan Creek or remnant floodplain deposits exposed during periods of severe beach erosion, and 3) reshaping of ancient deposits previously discharged by San Mateo Creek at lower stands of sea level by wave energy during the recent sea level transgression. This process is consistent with Figure 4 from Inman (1983) which shows that during periods of lower sea level, river incision results in the erosion of sand and cobble from the former river bed. This material is deposited at the mouth of the river during that period. As sea level begins to rise again, the cobbles are reworked shoreward by the gradual transgression of the high energy wave zone. The focus of wave energy on the point could have resulted in the concentration of cobbles extending out from the creek mouth as larger sized material tends to pile (Coastal Frontiers et al.,2001, Everts, 2000).

Many questions regarding the dynamics of the cobble features off of San Mateo Point remain unanswered. The longevity and stability of its expression implicates its importance in the consistency of good surfing waves at all Trestles breaks. Additional studies are necessary to understand the morphology of the cobble feature, its origins and relation to the surf.



Source: Inman (1983)
Notes: from Inman - (A)Schematic diagram for valley cutting during lowered sea level and bay trapping of sediment during sea level rise (B) Assumed sea level curve for times $t_1 - t_5$

f igure **4**

Toll Road Effects on Trestles Surfing Area

Possible Process for Cobble Placement

PWA Ref# 1815.00

PWA

3.2 POTENTIAL IMPACTS OF SOCTIIP ON HYDROLOGIC AND SEDIMENT PROCESSES IN THE SAN MATEO CREEK WATERSHED

Large infrastructure projects such as SOCTIIP affect the generation and delivery of water and sediment in their watersheds. Roads and their associated steep cut and fill slopes increase the amount of impermeable area, resulting in greater peaks and volumes of runoff from the same amount of rainfall. In addition runoff concentrates more rapidly, creating 'flashier' conditions that tend to create more surface erosion. This can be exacerbated when a road crosses local drainage lines. When the increased volume of runoff from impermeable areas is delivered to creeks it generally results in downcutting and erosion of the creek bed, leading to bank erosion and fine sediment delivery downstream. Thus, roads typically cause increases in erosion and fine sediment delivery in the watersheds through which they pass. This effect is especially pronounced in Mediterranean environments such as Orange and San Diego Counties, where numerous studies have shown that the landscape is especially sensitive to small increases in runoff. Because of the extreme seasonality of rainfall and the sparse vegetation cover, relatively small disturbances in the watershed can result in channel instability and increases in sediment yield (Cooke and Reeves, 1976).

Previous studies have shown that the degree of channel erosion and degradation is related to the degree of disturbance and the increase in impermeable area in the watershed upstream of the channel. Many studies have used the impermeable area values of 10% and 25% as thresholds denoting different levels of channel degradation. Channels where the upstream watershed has more than 10% impermeable area are generally considered to be severely impacted, while channels with more than 25% impermeable area upstream are often considered irreversibly damaged.

Theoretically, the use of erosion control features such as cut and fill slope revegetation, detention basins and bio-swales should limit erosion and reduce flow peaks from the road project. However, these features frequently do not perform as well as expected in erosion-prone Mediterranean landscapes, and the overall increase in runoff volume almost inevitably results in increased channel erosion, as demonstrated by the sites discussed in Section 4.2.1.

Whether excess sediment that is generated from the watershed is delivered to the river mouth depends on the grain size distribution of the sediment and the transport capacity of the creeks receiving the sediment. In transport-limited systems the creek carries the maximum amount of sediment possible for a given volume of water and gradient, so any additional sediment that is delivered is balanced by deposition of the excess sediment in the channel, leaving the total sediment load unchanged. Thus, in transport-limited creeks, increasing sediment delivery from the watershed does not increase the volume of sediment delivery to the creek's mouth in the short to medium term (years to tens of years). In the longer term (tens to hundreds of years) the excess sediment deposited in the creek's channel creates a steeper profile, increasing sediment transport capacity and delivering the excess sediment to the mouth. However, even in the short term changes in the size distribution of sediment delivered to the creek can be felt at the mouth. When there is an increase in the delivery of fine- and medium-sized sediment (silt and sand) to the creek, the creek will tend to deposit coarser sediment (gravel and cobbles) in its bed and transport the finer

sediment to the mouth. Thus while the volume of sediment remains the same (controlled by sediment transport capacity) the distribution of sediment becomes finer. This process has the potential to reduce the delivery of cobbles to Trestles.

4. REVIEW OF THE SOCTIIP EIS/SEIR

This section of the report reviews the SOCTIIP EIS/SEIR and supporting documents to assess the adequacy with which potential impacts to Trestles have been evaluated. The first sub-section discusses the project alignment and creek crossings. Subsequent sub-sections assess the amount of change that the project will cause in the ten to twelve sub-watersheds closest to the Trestles surfing area.

A key issue in our evaluation of the EIS/SEIR and its supporting documents is the large scale at which the EIS/SEIR evaluated watershed impacts. The EIS/SEIR bases the impacts of the toll road on sediment delivery to the mouth of San Mateo Creek on the PSOMAS (2003) hydrology report that assessed the runoff impact of the project. The PSOMAS (2003) study assessed the increase in impermeable area under the project, relative to the total area of San Mateo Creek watershed, and determined that because of the large watershed area relative to the area of the project the increase in runoff would be very small (1-2% for most storms). This predicted small increase in runoff in turn led to a small increase in predicted sediment yield in the sediment transport assessment of Boop and Cleary-Milan (2004). While it is true that the project footprint represents a small percentage of the total San Mateo Creek watershed area, it represents a very large percentage of each of the twenty sub-watersheds that it passes through on its course through San Mateo Creek watershed. These sub-watersheds are also proximate to Trestles, so that changes in sediment yield have a greater impact than equivalent changes in more distant sub-watersheds. In our review of the EIR/SEIS we focus on the potential impacts in the sub-watersheds closest to the Trestles surfing area.

The EIS/SEIR's conclusions that surfing conditions at Trestles are unlikely to be affected by the proposed project are also very sensitive to the assumption that sediment supply in San Mateo Creek is transport-limited. In a transport-limited system changes in watershed sediment supply may be irrelevant provided that more sediment is still delivered to the creek than the creek can deliver to its mouth. While our reconnaissance-level investigation of San Mateo Creek suggested that the creek may well be transport-limited, changes to the distribution of sediment sizes supplied from the watershed will still be felt at the creek mouth. Focusing solely on the *volume* of sediment overlooks the *composition* of the sediment, which may be crucial to the lagoon - beach barrier - delta dynamics of Trestles, and its resulting surf quality.

4.1 DESCRIPTION OF THE PROJECT WITH RESPECT TO RUNOFF AND SEDIMENT TRANSPORT

From the northeast, the proposed alignment of the SOCTIIP crosses from the San Juan Creek watershed and enters the San Mateo Creek watershed via the Cristianitos Canyon sub-watershed in the Donna O'Neil Land Conservancy. The alignment then joins the main valley of San Mateo Creek where it runs down the west side of the valley before joining Interstate-5 where the existing Interstate-5 bridge crosses San Mateo Creek. This proposed alignment traverses the core of the relatively less-disturbed and naturally functioning portions of the San Mateo watershed. It will have major impacts to approximately 20 individual and mostly natural subwatersheds. In this alignment, it crosses approximately 12 USGS 'blue line' creeks (creeks recorded on topography maps) draining sub-watersheds that are tributaries of San Mateo Creek and numerous smaller, ephemeral creeks. The proposed road alignment and design will result in significant alteration and degradation of the hydrologic and sediment regimes of each of these drainages. At present each of these sub-watersheds and related stream channel systems have evolved in response to the existing rainfall runoff patterns. The catchments have relatively little development and related impervious areas. As such, the watersheds supply surface runoff and subsurface infiltration into the streams that support the appropriate wetland and riparian vegetation. The sub-watersheds will respond to the full range of rainfall events that occur, ranging from frequent, low-intensity events to extreme, high-intensity rainstorms. The stream channels, vegetation and wildlife have all developed in response to the complex interaction between precipitation, watershed morphology, land cover, etc. Based on our field observations, with even relatively minor changes in the watershed land use, the stream channels are prone to instability and rapid degradation, with drastic impacts to both sediment production and channel habitat structure and function.

The construction of the toll road directly through all of these subwatersheds will result in massive changes to the hydrology of each of these drainages. The grading to create the road platform through this hilly (and at times, extremely steep) terrain will result in massive changes to the local land morpholgy. In addition, both the regraded slope areas and the impervious road surface areas will greatly alter rainfall-runoff relationships. Further alteration will result from the conveyance systems, and various proposed drainage facilities (detention basins, swales etc). Collectively, these changes result in the "hydromodification" impact, in which the rainfall-runoff processes and the corresponding flow frequency regime of the stream are altered by development.

The assessment of potential hydromodification impacts from this project on each of the local watersheds is inadequate. In the assessment of potential hydrologic impacts at the "local scale", the Runoff Management Plan (Psomas, 2003b) relies on the use of the "Rational Method" to characterize potential impacts to the rainfall-runoff process. This is a simplistic 3-parameter equation to estimate peak flow rates at one point in the watershed for one theoretical major storm event. While this method is useful for sizing flood conveyance facilities, it is completely inadequate for assessing the actual changes in the hydrologic regime of the watershed as it relates to stream channel stability, vegetation maintenance and other ecologic functions. It cannot be used to characterize how the runoff and consequent streamflow in each of the sub-watersheds will change for the wide range of actual rainstorms that occur over many

years. The runoff management report suggests that the application of standard highway BMPs will acceptably mitigate for the potential changes in runoff, but this is nowhere demonstrated in any of the documents. Numerous studies on the nature of hydromodification have demonstrated that the "design storm" methodology is inadequate to characterize the true changes in rainfall runoff response for hydromodification (and subsequent changes to channel stability and associated habitat functions). Additionally, the types of BMPs proposed (related primarily to water quality treatment and the removal of pollutants) are not adequate to prevent the destabilization of downstream channels (cf McCuen, 1979). As presented, it appears that the proposed drainage system will result in the reduction of flows in some subwatersheds (to convey the water to the proposed EDFs) while others will see increased water volume. From the simplistic analyses used, it not possible to determine either where these impacts will occur, or how significant they will be.

4.2 ASSESSING THE IMPACT OF THE PROPOSED PROJECT AT THE SUB-WATERSHED SCALE

To provide an initial assessment of the true scale of potential impacts of the project on the subwatersheds along the proposed road alignment, we used standard GIS tools to delineate the sub-watersheds, and superimposed the project disturbance limits to quantify the percentage of each sub-watershed that would be directly impacted by the proposed project. We also estimated the minimum impermeable area (taken as the footprint of the road pavement and shoulder) and assessed the area of the watershed that this represented. We also looked at the road footprint and impervious surface areas as a percentage of that portion of the subwatershed that lies upstream of the crossing location. This is a more accurate measure of the true scale of project impact on the stream channel and riparian corridor that are located downstream of the toll road. Potential impacts to these downstream reaches extend to the junction with San Mateo Creek. The results are shown in Table 1, and the project footprint and sub-watersheds shown in Figures 5-7.

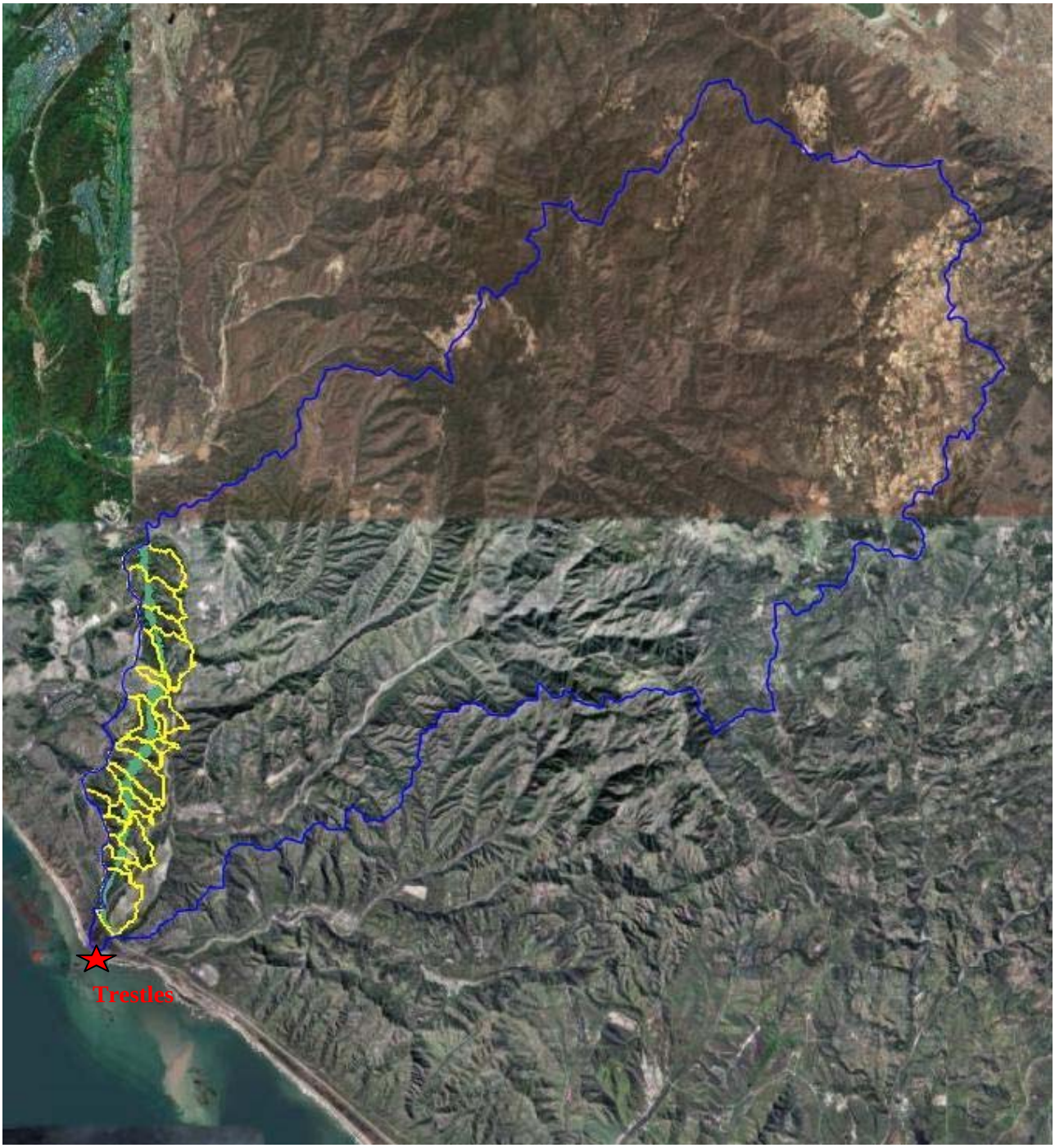
This assessment shows that the toll road footprint and roadway represent a significant portion of each subwatershed, and an even greater percentage of the subwatershed areas at the point of crossing. These numbers are very high when compared with the 10 and 25% thresholds for channel impact due to watershed urbanization.

4.2.1 Field Assessment of Channel Sensitivity to Runoff

In order to assess the sensitivity of the project area to increases in impermeable area and to creek crossings we conducted a reconnaissance of several creeks on the west side of San Mateo valley and Cristianitos Creek that will be crossed by the proposed alignment.

Site 1. Sub-watershed SM_3 near San Onofre State Park Campsite

Cristianitos Road crosses several unnamed tributaries of San Mateo Creek that will also be crossed by the proposed toll road alignment. PWA visited the tributary that passes under Cristianitos Road near to the entrance to San Onofre State Park Campsite to assess sensitivity of the channel to existing levels of



Source: image from GoogleEarth (2005)

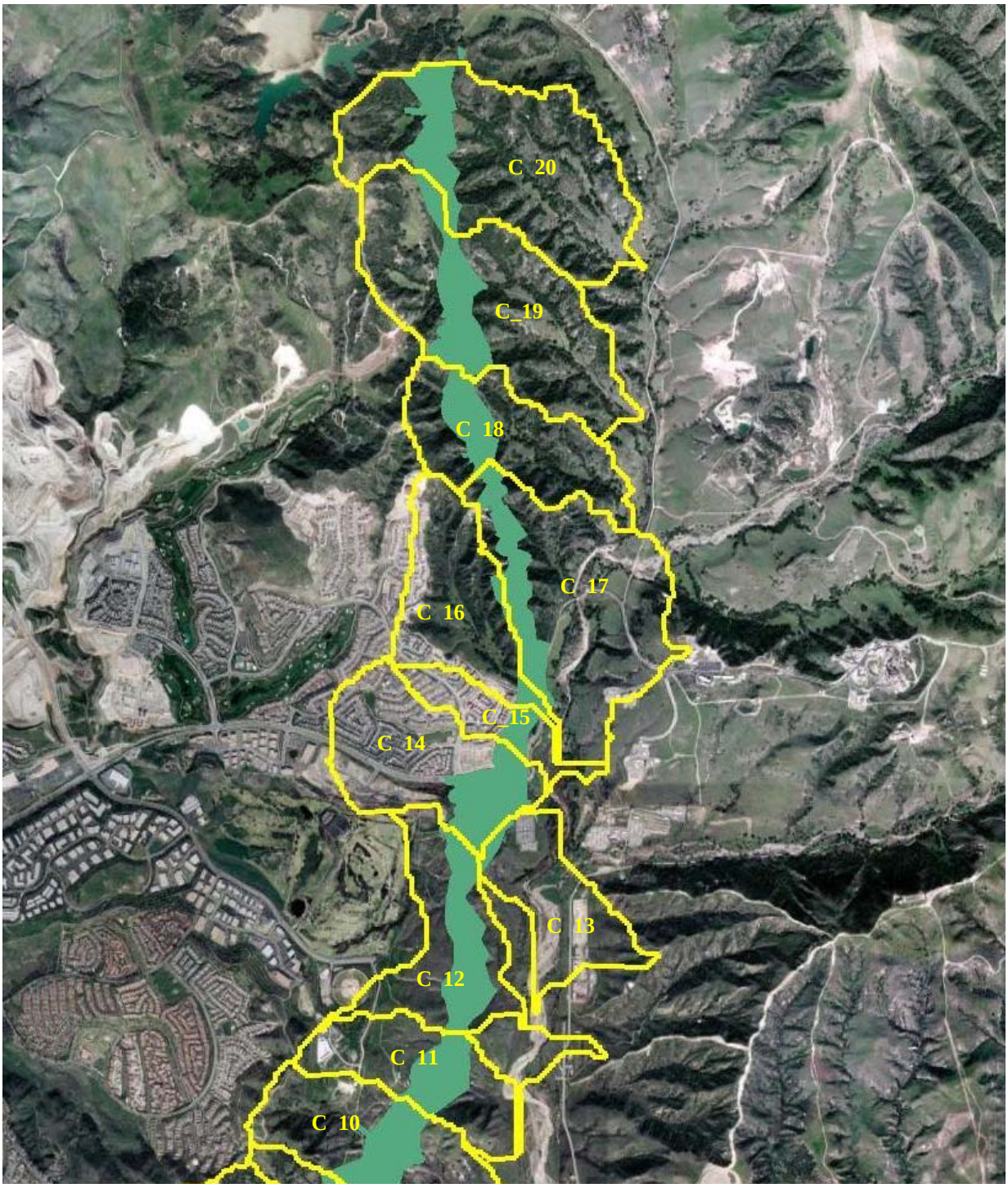
f igure 5

Toll Road Effects on Trestles Surfing Area

Subbasins Disturbed within San Mateo Creek Watershed

PWA Ref# 1815.00

PWA



Source: image from GoogleEarth (2005)

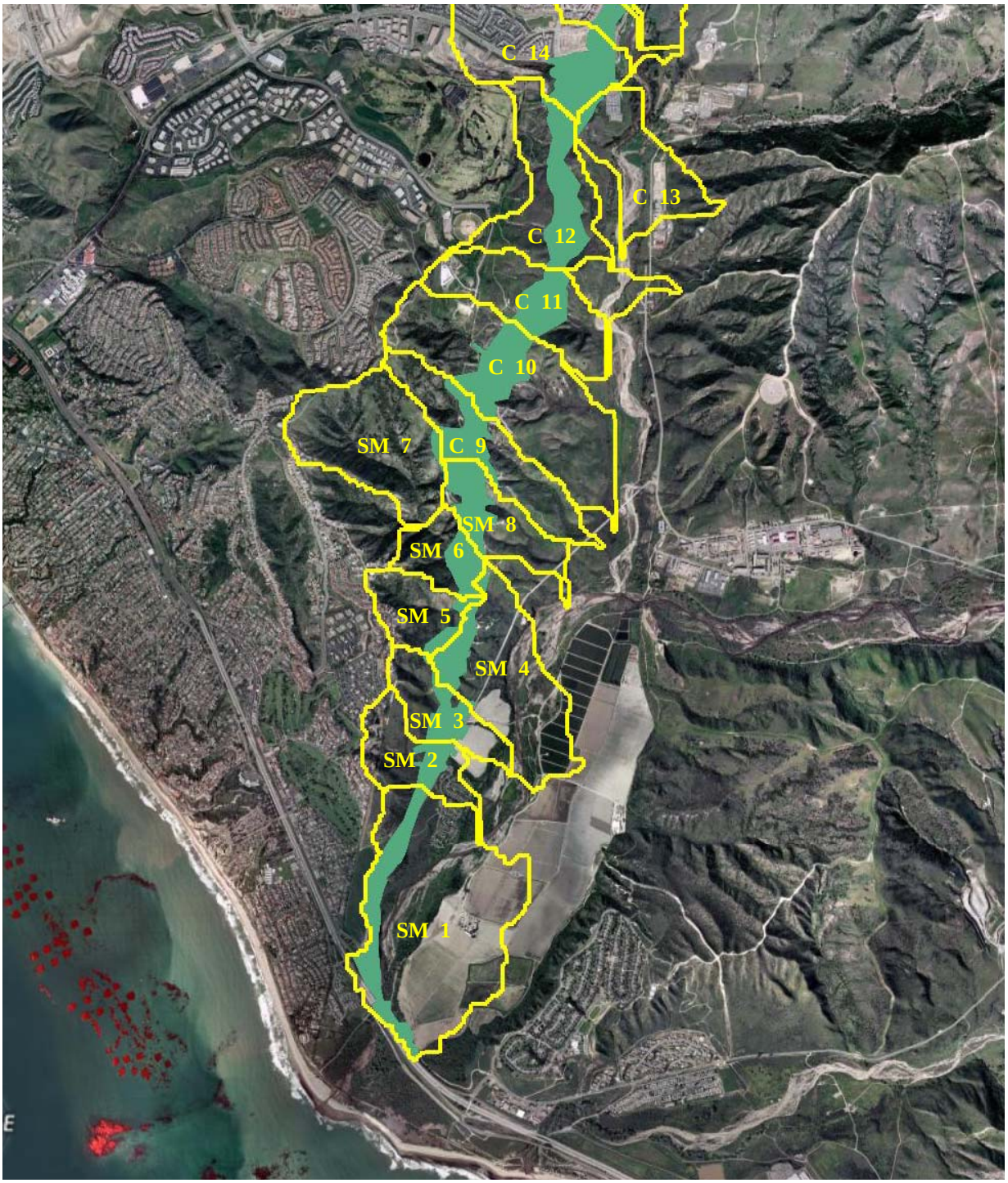
f igure **6**

Toll Road Effects on Trestles Surfing Area

Northeastern Subbasins in Disturbed Area of San Mateo Creek Watershed

PWA Ref# 1815.00

PWA



Source: image from Google Earth (2005)

f igure **7**

Toll Road Effects on the Trestles Surfing Area

Southwestern Subbasins in Disturbed Area of San Mateo Creek Watershed

PWA Ref# 1815.00

PWA

Table 1. Percentage of sub-watershed disturbed and made impermeable

Watershed Identifier	Watershed Area (ac)	% Watershed Area Occupied by Road Prism	% Watershed Area Impermeable
SM_01	443	70%	29%
SM_02	99	23%	5%
SM_03	91	38%	7%
SM_04	219	100%	16%
SM_05	81	15%	3%
SM_06	69	36%	7%
SM_07	202	2%	0%
SM_08	99	92%	16%
C_09	148	46%	8%
C_10	311	36%	5%
C_11	155	34%	6%
C_12	182	40%	9%
C_13	140	100%	0%
C_14	214	25%	4%
C_15	73	22%	6%
C_16	179	6%	1%
C_17	334	80%	24%
C_18	187	42%	9%
C_19	348	37%	8%
C_20	359	45%	8%

Note: SM denotes watersheds draining to San Mateo Creek mainstem, C denotes watersheds draining to Cristianitos Canyon. Watersheds are numbered from downstream to upstream. See Figures 6 and 7 for location.

disturbance from the watershed and Cristianitos Road (Figure 8). The channel is highly incised both upstream and downstream of the road, and the banks of the creek are actively slumping. The incision emanates from a crossing under a fire trail close to the upper end of the watershed. A small area of watershed has been developed upstream of this point, probably triggering the erosion downstream. This site shows the sensitivity of channels in this watershed to very small increases in impermeable area and to ground disturbance.

Site 2. Sub-watershed C_12 near San Onofre State Park Campsite

Site 2 is located at a culvert passing under Calle Extremo in a sub-watershed that drains to Cristianitos Creek (Figure 9). Downstream of the culvert erosion has caused a large amount of channel incision. Rock has been placed to try to prevent erosion, but due to the steep angle of the channel (close to the angle of repose) the rock is failing and the gully is eroding immediately downstream of the rock, undermining the repair. We would expect the rock to eventually fail and require replacement. As with Site 1, only the

a) Active channel erosion upstream of Cristianitos Road near San Onofre State Park Campsite (sub-watershed SM_3)

b) Site 1 location showing the incised channel and the small developed portion of the upper watershed.

Source: a) PWA Field Investigations (2005),
b) from GoogleEarth 2005

figure **8**

Toll Road Effects on Trestles Surfing Area
Site 1. Subwatershed SM_3

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a) Channel erosion downstream of Calle Extremo culvert (sub-watershed C_12)

b) Site 2 location showing incised channel and proposed toll road crossing.

Source: a) PWA Field Investigations (2005),
b) from GoogleEarth 2005

figure **9**

Toll Road Effects on Trestles Surfing Area
Site 2. Subwatershed C_12

PWA Ref# 1815.00

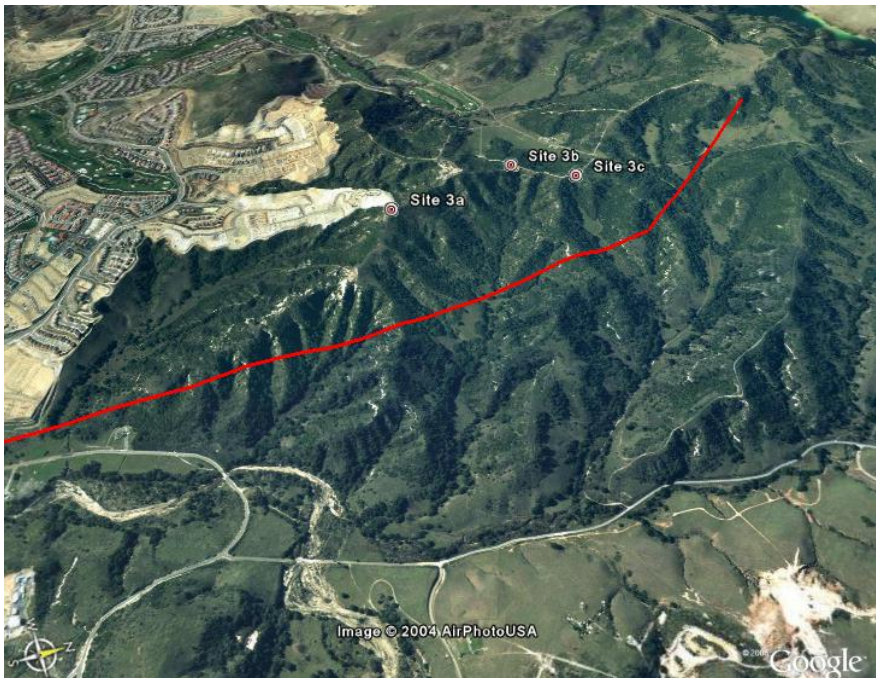
PWA

upper-most portion of this watershed has been developed and the impermeable area is relatively small. This site indicates the sensitivity of channels to small increases in impermeable area upstream, and also demonstrates the problems of channel erosion even with recently installed culverts.

Site 3. Sub-watersheds C_16 – C_20 in the Donna O'Neil Land Conservancy

The proposed road alignment will drastically alter the morphology and hydrologic regime of all 5 watersheds in the Donna O'Neil Land Conservancy which drains to Cristianitos Creek (shown in Figure 10). The site is composed of extremely rugged terrain that is currently undisturbed. The channels have an average slope of approximately 7%, which is extremely steep for channels passing through fine-grained soils such as are found in this watershed. Adding runoff to these streams is highly likely to lead to serious erosion problems. The Toll Road footprint will include 50% of several of the watersheds. The hydrology and sediment transport within the streams will be highly altered by the proposed project.

a) View of the proposed alignment through the Donna O'Neil Land Conservancy from Site 3



b) Location of Site 3, showing the approximate proposed road alignment

Source: a) PWA Field Investigations (2005),
b) from GoogleEarth 2005

f igure **10**

Toll Road Effects on Trestles Surfing Area

Site 3. Subwatersheds C_16 – C_20

PWA Ref# 1815.00

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EXHIBIT F

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W8b

ADOPTED STAFF REPORT AND RECOMMENDATION ON CONSISTENCY CERTIFICATION

Consistency Certification No.	**CC-018-07**
Staff:	ST/CT/MD-SF
File Date:	3/26/2007
3 Months:	6/26/2007
6 Months:	9/26/2007
Extended to:	2/28/2008
Commission Meeting:	2/6/2008
Commission Action:	Objection

APPLICANT: **Foothill/Eastern Transportation Corridor Agency**

DEVELOPMENT LOCATION: Between the existing terminus of the State Rte. 241 (at Oso Parkway), Orange County, and I-5 (near Basilone Rd.), Marine Corps Base Camp Pendleton, San Diego County (Exhibit 1)

DEVELOPMENT DESCRIPTION: Construction of 16 mi. long, 6-lane, Foothill Transportation Corridor-South (FTC-S) toll road (Exhibits 1-9)

SUBSTANTIVE FILE DOCUMENTS: **See page:** 273

[Staff Note: This project requires that the Commission concur in or approve both a consistency certification as well as a coastal development permit (CDP) for the portion of the project within the coastal zone. The CDP functions as the equivalent of a consistency concurrence for the portion of the project to which it pertains. The staff has encouraged TCA to submit a combined consistency certification/CDP application, as it did for the San Joaquin Hills Transportation Corridor that the Commission reviewed in 1992; however TCA has declined to submit a CDP application at this time. As a result, the consistency certification that is before the Commission pertains to the entire project both within and outside of the coastal zone. In addition to the Commission's concurrence in the consistency concurrence before it, TCA will also need to apply for and obtain from the Commission a CDP for the portion of this project in the coastal zone before it can proceed.]

EXECUTIVE SUMMARY

The Foothill/Eastern Transportation Corridor Agency (TCA) has submitted a consistency certification for the construction of the Foothill Transportation South (FTC-S) toll road in southern Orange and northern San Diego County. The proposed project would be approximately 16 miles long, with an additional 0.8 miles of improvements along Interstate 5 (I-5), stretching from the existing SR-241 terminus at Oso Parkway to I-5 on the Marine Corps Base Camp Pendleton. TCA states the project is needed to reduce traffic congestion, stating:

> *The purpose of the SOCTIIP* [FTC-S] *is to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area. The Preferred Alternative meets this purpose because it provides the number of traffic lanes necessary to meet forecasted traffic demand through 2025, which is the design forecast year for the SOCTIIP and the planning horizon year for regional plans and socioeconomic forecasts. The Preferred Alternative also meets the purpose because it accommodates the need for mobility, access, and goods movement by providing increased traffic capacity and because it provides an alternative route to I-5.*
>
> *One of the project purposes is to improve the projected future level of service (LOS) and reduce the amount of congestion and delay on the freeway system and, as a secondary objective, the arterial network, in southern Orange County. The overall goal is to improve projected levels of congestion and delay as much as is feasible and cost-effective. This may include strategies that lead to a reduction in the length of time LOS F will occur, even if the facility will still operate at LOS F for a short period of time, if the strategy will result in benefits to the traveling public and more efficient movement of goods by reducing total delay. The Preferred Alternative furthers this objective by increasing overall regional capacity and reducing congestion on I-5 and local arterials.*

Environmentally Sensitive Habitat Areas (ESHA)

The project is fundamentally inconsistent with the spirit and letter of numerous resource protection policies of the Coastal Act. The project involves development within environmentally sensitive habitat areas (ESHA) and is inconsistent with the ESHA policy (Section 30240), which only allows “uses dependent on the resource” within an ESHA. Moreover, the project is inconsistent with the additional requirements of Section 30240 because it would not protect the ESHA against any significant disruption of habitat values; not be sited and designed to prevent impacts which would significantly degrade those areas; and not be compatible with the continuance of the ESHA. The ESHA include habitat for the Pacific pocket mouse, tidewater goby, arroyo toad, coastal California gnatcatcher, least Bell’s vireo, and southern California coast steelhead. The most significant adverse impacts, impacts which cannot be mitigated, would be to the Pacific pocket mouse. In fact, it is highly likely that the project would result in the complete loss

of one of the three remaining limited populations of Pacific pocket mouse and thereby hasten the extinction of the entire species, which is federally listed as endangered. The project would also likely result in the loss of the only remaining coastal population of the arroyo toad, also federally listed as endangered, because it proposes at least three years of significant construction activities within more than 39 acres of ESHA for this species. The project also proposes to conduct grading, vegetation removal, and substantial landform alteration associated with the placement of the six lane toll road within 32 acres of the vitally important coastal sage scrub vegetation community that provides federally designated critical habitat for the coastal California gnatcatcher, a third species listed under the federal Endangered Species Act. Moreover, the project proposes permanent and prolonged use of wetland areas totaling over 29 acres, areas that have included federally designated critical habitat for two species that are federally listed as endangered, the tidewater goby and arroyo toad, and provide essential ESHA habitat for two others also provided with this listing status, the least Bell's vireo and southern California coast steelhead.

In addition to the disturbance and destruction of untold numbers of these six species and potentially irreparable harm to their local, regional and global populations, populations which have been consistently recognized as both vitally important and gravely threatened, the project would fragment and transform one of the last remaining intact watersheds and coastal canyon ecosystems in all of southern California. Considering the magnitude, extent and duration of activities associated with the project it is highly likely that well over 50 acres of ESHA would be degraded or permanently lost. As evidenced by the large number of threatened or endangered species and federally designated critical habitats within the relatively small portion of the project area that is proposed to occupy the coastal zone, and the fact that well over one-third of the 138 acre project footprint within the coastal zone has been found to meet the Coastal Act definition of ESHA, it would be difficult to imagine a *more* environmentally damaging alternative location for the proposed toll road and one which would be more clearly inconsistent with the environmentally sensitive habitat resource protection requirements contained within Coastal Act Section 30240.

Wetlands

The project also involves wetland fill, and is inconsistent with the **allowable use test** of the Wetlands policy (Section 30233(a)) as it is not one of the seven allowable uses for wetland fill. TCA argues that the proposed toll road, as an "incidental public service," is an allowable use "…because it fits within the historically accepted interpretation of the term." The Commission's historic interpretation does not allow new highways to be considered incidental public services. This position is supported in the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, where the court found that:

> *… we accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions.*

> *Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*

The project: (a) is not a temporary disruption; (b) is not a limited expansion of an existing road; and (c) will increase highway capacity. Therefore it cannot be considered an allowable use as an incidental public service under Section 30233(a)(4).

The project is also inconsistent with the **alternatives** test of the Wetlands policy (Section 30233(a)) because it is not the least environmentally damaging feasible alternative. The "build" alternatives most recently considered by TCA consist of:

(a) three toll road alternatives that converge to one in the San Mateo Creek watershed (i.e., the three FEC (Far East Corridor) alternatives, one of which (A7C-FEC-M) is the proposed toll road);
(b) one full toll road in San Clemente (i.e., the CC (Central Corridor));
(c) one toll road not fully connecting with I-5 (i.e., the CC-ALPV (Central Corridor, Avenida La Pata);
(d) improvement of existing arterials in San Clemente (i.e., AIO (Arterial Improvements Only); and
(e) I-5 widening.

Grounds for TCA's rejection of alternatives included: (a) it does not meet the project purpose and need; (b) cost of construction (including mitigation) is excessive; (c) there are severe operational or safety problems; (d) there are unacceptable adverse, social, economic, or environmental impacts; (e) there would be serious community disruption; (f) there are unsuitable demographics (for transit alternatives); and (g) there are logistical or technical constraints. TCA rejected the AIO and I-5 alternatives because they lack funding sources. TCA rejected the CC, CC-ALPV, and A7C-ALPV alternatives because they would result in "severe community disruption." TCA states:

> *Selection of the Preferred Alternative represents a coordinated balanced approach to minimizing harm to both the natural and built environments. The A7C-FEC-M as the Preferred Alternative culminates years of analysis and evaluation, engineering refinement, inter-agency consultation and coordinated consensus.*

The Commission agrees with TCA's assessment in only one respect, which is that of the three San Mateo Creek alternatives, the two more easterly alternatives rejected would indeed be more damaging than the proposed alignment. However, in all other respects the Commission disagrees with TCA. Each of the three San Mateo Creek alternatives (including the proposed project) would clearly result in significantly more environmentally damaging, and far more irreversible, impacts to environmentally sensitive habitat, wetlands, public access and recreation, and cultural resources than the other impacts which were studied. TCA's habitat comparisons of the alternatives have not been taken fully into account: (a) the quality of the habitat, including severe threats (if not extinction) to the Pacific pocket mouse; (b) severely

adverse indirect effects, particularly overall habitat fragmentation effects on wildlife movement; (c) other modifications to a particularly valuable regional habitat mosaic; (d) the regionally significant, higher quality, and uniqueness of the recreational (including surfing) resources; and (e) and important archaeological resources. When the value of these resources is taken into account, the project is the most environmentally damaging rather than the least environmentally damaging feasible alternative (aside from the other two San Mateo Creek alternatives).

Moreover, the toll road's impacts would be permanent, irreversible, and, for the most part, unmitigable. No other alternative alignment poses the threat of unmitigable and irrevocable impacts of such magnitude. The proposed alignment also raises disturbing questions about the integrity and permanence of areas that have been set aside as habitat preserves, state parks, and in the case of the campground, mitigation for impacts of previously-approved development. The Commission does not agree with TCA's rejection of the CC, CC-ALPV, I-5 Widening, A7C-ALPV, and AIO Alternatives for "unacceptable adverse, social, economic, and environmental impact" reasons, or for "serious community disruption" reasons. TCA's comparison of impacts from these alternatives and the weight given to community disruption do not take into account the quality of the resources being affected, or reflect prioritization of resource values according to the resource protection priorities contained in the Coastal Act. Numerous other alternative alignments are feasible and could be found consistent with the Coastal Act, including: (1) the Central Corridor (CC); (2) Central Corridor-Avenida La Pata (CC-ALPV); (3) Alignment 7 Corridor-Avenida La Pata (A7C-ALPV); (4) Arterial Improvements Only (AIO); (5) the I-5 Widening Alternative (I-5), as described in the FSEIR or (6) the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative," prepared by Smart Mobility, Inc. (Revised January 2008). The "Smart Mobility" Reports, and accompanying Peer Review (Bergmann Associated, January 23, 2008), provide ample technical, economic, and social data to show the I-5 widening would not only be a logistically and technically feasible alternative, but one that would be less costly, less socially damaging, and less environmentally damaging than the proposed toll road or the I-5 widening alternative described by TCA.

Thus, TCA's assumption that community disruption and higher economic cost can be accorded higher priority than the exceptionally limited and valuable sensitive habitat, recreation, and archaeological resources is in direct conflict with the resource protection priorities spelled out in the Coastal Act. Southern California highways are regularly implemented using condemnation procedures. Freeway dependent southern California would not exist as we know it if this were not the case. Unlike the more easily quantifiable social and economic mitigation typically associated with condemnation, the type and extent of adverse impacts to coastal resources this toll road would cause cannot be mitigated and would be irreversible. Therefore, based on the priorities established in the Coastal Act, the proposed project does not represent the least environmentally damaging feasible alternative and is, therefore, inconsistent with the alternatives test of Section 30233(a) of the Coastal Act.

TCA proposes wetland mitigation both within the coastal zone (a one-acre area next to its proposed detention basin along I-5), and outside the coastal zone (a larger mitigation area 12-16 miles inland). However, the Commission lacks sufficient information to determine whether the project is consistent with **the mitigation test** of the wetlands policy (Section 30233(a)) because TCA has not provided sufficiently detailed information regarding the temporary impacts and mitigation plan. Thus, the Commission does not have an adequate jurisdictional wetland determination either for the wetlands present within the disturbance limits, or for the mitigation areas. TCA also did not perform a functional capacity analysis as required under Section 30233(c) of the Coastal Act.

Public Access and Recreation

The project would result in significant adverse effects on public access and recreation, particularly at the campground and related recreational resources in San Onofre State Beach (SOSB). Significant adverse effects would occur both during construction and after completion. Such effects may include the de-facto closure of the coastal access Panhe Trail, the abandonment or severely limited use of the San Mateo Campground, the temporary occupation and permanent alteration of the California Coastal Trail, and the overall interference and degradation of the recreational use of SOSB. The elevated and prolonged sound levels resulting from the proposed project would result in substantial reductions in the availability of public access and the severe degradation of the quality of the coastal recreation and access resources at SOSB. These resources are unique and of incomparable value in southern California. As with the ESHA effects, these adverse effects too would be unmitigable. Nevertheless, TCA has proposed to provide $100 million to the California Department of Parks and Recreation to "augment" the region's recreational opportunities. According to the proposal developed by TCA, which it is careful to not characterize as "mitigation" per se, this funding could be used to enhance existing camping and recreational resources provided by several state parks and state beaches within northern San Diego County and southern Orange County and to fund habitat restoration activities and the extension of the San Onofre State Beach lease with the Department of the Navy in 2021. Although CDPR has not responded to this proposal, or to the feasibility of the projects proposed by TCA, the Commission finds that while the offer may result in benefits to the State Parks system, it would clearly not mitigate this project's impacts to irreplaceable resources. The Commission reiterates the statement and analysis conducted by CDPR in 2006 which determined that "not only can mitigation not be completed on-site due to the project itself, but that there is no longer adequate open space coastal property to replace that which would be lost at SOSB." The project would, therefore, be inconsistent with the Public Access and Recreation policies (Sections 30210, 30211, 30212, 30213, 30214, 30220, and 30240(b)) of the Coastal Act.

Surfing

The recreational resources at SOSB are inextricably associated with the surfing at Trestles Beach, located downstream from the toll road at the mouth of the San Mateo Creek. World renowned for its consistent, near perfect waves, Trestles provides some of the best year-round surfing waves in Southern California, an area with the greatest

concentration of surfers in the world. Surfing at Trestles is an integral component of the coastal recreational experience at SOSB and a quintessential coastal zone resource. The Trestles coastal setting is virtually unparalleled in Southern California both due to high quality waves and aesthetics. The high quality waves, dependent on cobbles and sediment from the watershed, may be adversely affected by alterations to the hydrological regime. Experts disagree over whether these alterations would occur, but a review of TCA's newly submitted Runoff Management Plan reveals that it is quite probable an increase in fine sediment will occur. Additionally, the flow velocities in San Mateo Creek are likely to be reduced. Either result will impact the continued existence of the cobble delta. Therefore, the Commission concludes that the proposed toll road will likely affect the specific mix of sediments, sands, and cobbles thus resulting in an impact to the surfing resources. If adverse effects occurred they would be unmitigable and irreversible. Regardless, the proposed toll road would clearly adversely affect the aesthetics and the natural setting of surfing experience. TCA has not adequately demonstrated that the surf break at Trestles would be protected if the toll road were built in this watershed. Based on the aesthetics issue alone the project is inconsistent with the surfing policies (Sections 30220 and 30213) of the Coastal Act.

Public Views

Visual resources are also closely intertwined with recreation at SOSB. The project is inconsistent with the scenic view protection policy (Section 30251) because: (a) it would add to the coastal public viewshed a permanent feature that is not visually compatible with the surrounding area; (b) less damaging alignments are available that would significantly reduce scenic view impacts; (c) the project does not minimize alteration of natural landforms; (d) the project has not been sited and designed to protect views to and along the ocean and scenic coastal areas. The important link between the visual and recreational resources at SOSB and Trestles add to and exacerbate the extent of inconsistencies with the public access, recreation, and surfing policies discussed in the previous paragraphs.

Water Quality

The Commission lacks sufficient information to determine the project's consistency with the Water Quality policy (Section 30231) of the Coastal Act. TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices ("BMPs") and treat additional runoff from I-5. On September 17, 2007, TCA submitted its most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff. Review of this plan will be discussed in an addendum to this report. However, the Regional Water Quality Control Board (RWQCB) staff has raised a number of questions about the adequacy of this plan, as have hydrological consultants to Surfrider Foundation (Philip Williams & Associates, Ltd.), who have questioned the scale of TCA's hydrological analysis.

San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, because their watersheds are far less developed than most

southern California watersheds. The proposed detention basins on I-5 TCA proposes to construct may help offset impacts on the watershed from the increased runoff and pollutant loadings from 8-9 miles of highway being constructed along San Mateo Creek and its tributary, Cristianitos Creek, but it is not clear how substantial a benefit this would provide. In addition, while TCA states that it is providing these collection facilities voluntarily, and beyond what would be required for its project, the RWQCB staff discounts this assertion, noting that State Water Board policies require installation of such BMPs when improving existing roads. The RWQCB staff further notes that none of the available data suggest an existing water quality impairment, that the lower portions of San Onofre and San Mateo Creeks have not been proposed to be listed as impaired, and that quantifying benefits from the proposed project is difficult without adequate baseline data.-

Archaeology

Historically, the Native American tribe Acjachemen (later named the Juaneño) occupied the greater project region, from Long Beach to Oceanside, east to Lake Elsinore, and west to Catalina Island. The project area contains numerous archaeological remains. *Panhe,* the ethnographic village of the Juaneños, lies within the San Mateo Archeological District located in parts of SOSB. Descendants of the Juaneños still use a portion of *Panhe* today for religious and ceremonial activities, including the Ancestor Walk, an important cultural event among Acjachemen, Tongva, Chumash, Tataviam and other Southern California tribal communities. To evaluate the project's impacts, the State Historic Preservation Officer (SHPO) has requested that TCA provide a Traditional Cultural Property evaluation for *Panhe,* as well as for Trestles, which the California Department of Parks and Recreation has submitted for consideration on the California Register of Historic Resources and the National Register of Historic Resources. TCA has stated it will not perform these evaluations.

Consistent with the SHPO's opinion, the Commission finds that TCA has not provided sufficient information to enable the Commission to identify the full range of adverse impacts to cultural resources and their potential mitigation. Absent this level of analysis, the Commission is not convinced all mitigation options (specifically avoidance) have been explored. Therefore, the Commission finds the proposed mitigation measure to be premature and not "reasonable."

In addition, the impact analysis performed by TCA has revealed at least three resources for which the proposed mitigation will not reduce adverse impacts to below a level of significance. This is further substantiated by the need to adopt a Statement of Overriding Considerations during FEIR certification. In addition, the impacts to the Juaneño/Acjachemen people who currently use the ceremonial site are completely unmitigated. TCA has neither included avoidance measures in its proposed mitigation for these impacts, nor has it demonstrated why avoidance mitigation measures could not be incorporated. This would appear to leave the Commission's preferred mitigation measure (avoidance) available, precluding the proposed mitigation from being "reasonable." Based on these two findings, the Commission therefore concludes that it lacks sufficient information and that the proposed toll road, in this location, is inconsistent with § 30244. The Commission lacks sufficient information to determine the project's consistency with the archaeological policy of the Coastal Act (Section 30244)

because, based on the advice of the SHPO, TCA has not provided sufficient information to enable the Commission to identify the full range of adverse impacts to cultural resources. The Commission is therefore unable to assess whether the proposed mitigation qualifies as "reasonable mitigation" as required under Section 30244 of the Coastal Act. Traditional Cultural Property evaluations for *Panhe* and Trestles are necessary to provide the Commission with the information needed to adequately assess the project's impacts and mitigation.

Energy and Vehicle Miles Traveled

The project is inconsistent with the energy and vehicle miles traveled policy (Section 30253(4)). The greenhouse gas emissions directly resulting from the amount of cement required and the construction-related emissions over a four-year period would contribute significantly to global warming. TCA maintains operation impacts from emissions would be neutral or beneficial, because the toll road is intended to relieve congestion on I-5, and thus pollution from the higher-speed and thus shorter vehicle trips would be reduced. Ultimately, it is more likely that the proposed toll road would encourage continued growth, low density housing and inefficient transit patterns, and that the traffic system within the region would be equally or more congested than it is currently. Thus the toll road's impact on emissions is likely to add to, rather than reduce, vehicle emissions on I-5. TCA has not provided mitigation for either construction or operation emissions.

Conflict Resolution

Contrary to TCA claims, the project does not pose a conflict between Coastal Act policies warranting review of the project under the conflict resolution policy of the Coastal Act (Section 30007.5). TCA asserts that if the Commission does not agree with TCA that the project is consistent with Chapter 3 of the Coastal Act, then the project qualifies for review under the conflict resolution policy (Section 30007.5) because of its benefits to coastal resources from: (a) water quality improvements (i.e., treating additional runoff); (b) decreased traffic congestion allowing more capacity for visitors to use I-5 for recreational purposes, and increased access to the coast for inland residents; and (c) public safety reasons (i.e., improved ability to evacuate the area in the event of a nuclear power plant accident/explosion, fire or tsunami).

Many of these issues have been discussed in detail above. Concerning **water quality**, San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, and both the Commission and the RWQCB staff question the value of the proposed detention basins on I-5 proposed by TCA. The RWQCB staff has asserted that the basins would be a normal project requirement, that there is a lack of available data suggesting existing water quality impairment or that the lower portions of San Onofre and San Mateo Creeks are impaired, and that quantifying benefits from the proposed project is difficult without adequate baseline data. In addition, the Commission notes that:

(a) not authorizing the project would be more protective of water quality in San Mateo Creek;

(b) TCA has estimated the amount of some pollutants that should be removed by the sand filter basins, but Jeremy Hass, of the San Diego RWQCB staff, is still concerned that without baseline data he cannot assess whether the Sand Filter Basins are adequately protecting water quality from local stressors (email to CCC staff dated January 23, 2008);

(c) the project differs highly from the TCA-cited situation for the City of San Diego's Route 56 project (CDP 6-98-127), which involved minor habitat impacts and benefits to an impaired water body, and is not comparable to any of the other cases TCA cited involving water quality considerations;

(d) the project does not pose a conflict between the wetland/ESHA policies on the one hand and water quality policies on the other; and

(e) the toll road is not what will treat stormwater run-off from I-5; rather, it is the proposed improvements such as detention basins that will treat the run-off. These detention basins are mitigation measures, and they can be constructed to treat the run-off regardless of whether the toll road is constructed.

Concerning **public access and recreation**, again TCA does not quantify its stated benefit of bringing additional visitors to the coast, which would contradict another of its assertions regarding wetlands which characterizes the project as an incidental public service. TCA also has not provided evidence that the project would be used by significant numbers of recreational travelers, who are generally less willing to pay tolls to reduce travel times, as opposed to commuters. In any event, the project's adverse effects on recreation far outweigh this purported benefit.

Concerning its assertions of an **emergency evacuation** benefit, TCA also does not quantify that purported benefit. TCA has not established that existing evacuation plans are inadequate, or that additional highway capacity is needed in this location for this purpose. Operators of the San Onofre Nuclear Generating Station (SONGS), the U.S. Marine Corps, and the Governor's Office of Emergency Services (OES) all maintain that the existing evacuation and emergency response plans are adequate and are tested every year. Southern California Edison could not operate SONGS if adequate emergency response plans did not exist. Moreover, alternatives are available to increase traffic capacity in the region and any could be used to supplement emergency evacuation needs, if such a need did exist.

Finally, assuming for the sake of discussion that the project were to raise a conflict between Coastal Act policies, justification for accepting the project's significant adverse environmental effects discussed above (Environmentally Sensitive Habitat Areas, Wetlands, Public Access and Recreation, Public Views, Surfing, Water Quality, Archaeological Resources, and Energy and Vehicle Miles Traveled) in order to provide unsubstantiated water quality, public access and improved emergency response benefits, would not be supported by any previous Commission actions, and would not be consistent with Section 30007.5 because it is not a

resolution which is, given the facts in this case, "on balance, most protective of significant coastal resources."

Finally, the federal consistency regulations provide that, if the Commission's objection is based on a finding that the proposed activity is inconsistent with the California Coastal Management Plan (CCMP), the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. No measures exist that would enable the proposed alignment to be found consistent with the Coastal Act. However, numerous alternative alignments are feasible and could be found consistent with the Coastal Act, including: (1) the Central Corridor (CC); (2) Central Corridor-Avenida La Pata (CC-ALPV); (3) Alignment 7 Corridor-Avenida La Pata (A7C-ALPV); (4) Arterial Improvements Only (AIO); (5) the I-5 Widening Alternative (I-5), as described in the FSEIR; or (6) the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative," prepared by Smart Mobility, Inc. (September 2007). Implementation of any of these alternatives, if carried forward to a complete level of design with impact avoidance, minimization, and mitigation measures, could be brought into conformity with the CCMP.

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Correspondence (separate appendix)

I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description.

TCA proposes the construction of the Foothill Transportation Corridor-South (FTC-S) toll road[1], a limited access highway (toll road) that would extend the existing SR-241 toll road (FTC-N), south from its existing southern terminus at Oso Parkway in southern Orange County to I-5 on Marine Corps Base Camp Pendleton in northern San Diego County. TCA would build the road, collect the tolls, and operate the toll system until the construction bonds are paid off; Caltrans would maintain the highway in perpetuity and would operate the highway once the bonds are paid off. The project includes construction of toll collection facilities, and at least one mainline toll plaza.

The proposed toll road would be approximately 16 miles long, and would include approximately 0.8 mile of improvements along I-5. The southernmost approximately 0.25 mile, plus the improvements along I-5, would be within the coastal zone. TCA initially proposes to construct four general-purpose travel lanes, two in each direction, for the entire length of the corridor. Two additional lanes (one in each direction) would be added in the future as traffic conditions warrant. The northernmost portion of the toll road (from Oso Parkway to Ortega Hwy.) would include a median and have a total paved width of 128 ft. The median would be convertible for future high occupancy vehicle (HOV) lanes. The southern section, from Ortega Hwy. to I-5 would not include the median and would include an initial construction of 89 ft. of paved width. Any future HOV lanes would be in the center, and if and when they are proposed, the ultimate paved width would also be 128 ft.

According to TCA's FSEIR, the project includes approximately 41 million cubic yards of grading (22 million cubic yards of cut and 19 million cubic yards of fill), plus an additional 18 million cubic yards of "remedial" grading to stabilize landslides (FSEIR, p. 4.20-14 and Table 4.20-2). Cross sections for fill slopes depicted in the FSEIR within San Onofre State Beach include a maximum fill slope of 190 ft. high, 620 ft. wide (Cross Section 7, FSEIR Figure 4.18-17A 5). Maximum cut slope (Cross Section 9, FSEIR Figure 4.18-17A 6) would be 175 ft. high, and 600 ft. wide. The total footprint of the FTC-S would be 1,194 acres. This includes areas for grading, remedial grading, and construction disturbance, areas for paved roads and associated bridges and interchanges, access roads, materials storage areas, areas for utility relocations and areas for the construction of Best Management Practices (BMPs) (such as detention basins, filter strips, and other water quality features). Bridges are proposed at major waterway crossings, including San Juan, San Mateo, and San Onofre Creeks. The project also includes a wildlife movement bridge in Cañada Chiquita, and large diameter culverts to allow wildlife movement underneath the toll road in several locations.

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[1] Also referred to in this report as "SOCTIIP" (the Southern Orange County Transportation Infrastructure Improvement Project), "A7C-FEC-M" (Alignment 7 Corridor, Far East Crossover), "the SR-241 extension," or "the proposed toll road."

TCA estimated the project cost (in November 2005) of $805 million for construction and $70 million for land acquisition (for a total of $875 million). The construction period would be 3-4 years. TCA's current schedule does not anticipate construction prior to 2011.

From north to south, the proposed toll road would begin at the existing terminus of SR-241, follow the east side of Cañada Chiquita, across San Juan Creek to Ortega highway, through the west side of the Donna O'Neill Land Conservancy, then south through the San Onofre State Beach lease area of Camp Pendleton Marine Corps Base, crossing over Cristianitos Road, crossing over San Mateo Creek, then joining I-5. Southbound connections to I-5 and northbound connections from I-5 would be direct. Travelers driving southbound on I-5 going north on the toll road, and southbound travelers on the toll road driving north on I-5, would use Cristianitos road for the connection.

The project includes construction of toll collection facilities, and at least one mainline toll plaza. Key components of the toll road include continuous mainline travel lanes and ramps south of Oso Parkway, several wildlife structures/bridges to facilitate wildlife movement, an approximately 2,100 foot bridge structure crossing San Juan Creek, a toll plaza north of Ortega Highway, ramp toll plazas at Cow Camp Road and Avenida Pico, an approximately 2,859 foot long elevated bridge structure spanning San Mateo Creek and I-5 providing a direct connection to I-5, and reconstruction of the existing I-5 Basilone Road interchange.

Within the coastal zone, the toll road would be on federal land (Marine Corps Base Camp Pendleton) leased to the state for San Onofre State Beach (SOSB), within subunits 1 and 2. The current lease to the state is valid through 2021. TCA describes the construction proposed within the coastal zone as follows:

> *That portion of FTC-S within the coastal zone includes the proposed SR-241/I-5 connectors, significant water quality treatment improvements, and several national security improvements. The northbound and southbound SR-241/I-5 connectors will consist of two general-purpose lanes in each direction on two bridge structures over San Mateo Creek. See Figure 3, Foothill Transportation Corridor - South. The project elements within the coastal zone include the following:*
>
> *Highway Improvements*
>
> - *I-5 connectors to and from FTC-S (one southbound SR-241 to southbound I-5 connector and one northbound I-5 to northbound SR-241 connector), which bridge over San Mateo Creek*
> - *The realignment and reconstruction of the existing I-5/Basilone Road interchange and ramps with no direct connection of SR-241 to Basilone Road*
> - *A minor widening of I-5 south of Basilone Road to accommodate the project connector roads*
> - *A sound wall south of Basilone Road*
> - *The widening of the I-5 bridges over San Onofre Creek*
> - *A sound wall on the south side of I-5*

- *A sound wall east of the San Mateo Point housing area on MCB Camp Pendleton west of I-5*
- *Construction of a new public sidewalk along Cristianitos Road*
- *Reconstruction of a public sidewalk at the Basilone Overcrossing*

Water Quality Improvements

- *Water quality improvements to approximately two miles of I-5 that currently has no water quality treatment infrastructure, which will capture for treatment an estimated 5 million gallons of storm water each year that currently flows to San Onofre and San Mateo Creeks untreated*
- *Two on-site extended sand filter, one adjacent and tributary to San Mateo Creek (41 acre area = System 1) and the other adjacent and tributary to San Onofre Creek (62 acre area = System 2)*
- *A bioswale, vegetated with native grasses, for treatment of freeway storm water from SR-241*

Military and National Security Improvements

- *The reconstruction and replacement of the San Onofre Gate to provide entry to MCB Camp Pendleton, which will include new enhanced security facilities per the Anti-Terrorist Force Protection Program (ATFPP)*
- *A widened military access road under the southerly end span of the existing San Mateo Creek/I-5 Bridge, allowing improved Marine amphibious access between Green Beach and northern military training areas*

As the I-5/SR-241 connectors enter the coastal zone from the north, the initial 800 feet will be excavated below the elevation of the existing terrain to establish finished road grade. A section of the northbound connector will be placed on fill behind a retaining wall. The connectors will be on bridge structures over San Mateo Creek.

The southbound bridge structure (southbound FTC-S/SR-241 as it transitions to southbound I-5) will be approximately 3,910 feet long with 14 column supports. At the highest point, where the southbound connector crosses over the I-5, the bottom of the bridge and the road deck will be approximately 28 feet and 11.8 feet above the I-5 grade, respectively. From this high point, the southbound connector decreases in elevation to approximately that of I-5 as it crosses under the reconstructed Basilone Road Overcrossing. The northbound bridge structure (northbound I-5 as it transitions to northbound FTC-S/SR-241) over San Mateo Creek will be approximately 3,860 feet long with 15 column supports. This bridge is not as high as the southbound structure because it stays to the northeast and does not cross over the 1-5 travel lanes. The bridge decreases in elevation from a high point of approximately 20 feet above I-5 as it leaves the bluff and crosses over San Mateo Creek. South of San Mateo Creek, the northbound connector is generally at the same elevation of I-5 as it begins to parallel the travel lanes and crosses under the reconstructed Basilone Road Overcrossing.

> *To accommodate the FTC-S connectors passing underneath the Basilone Overcrossing, the Basilone Road Overcrossing at I-5 will be realigned and reconstructed along with the four Basilone Road ramps to and from I-5, as well as a portion of Basilone Road. Minor cut-and-fill grading and retaining walls will be utilized south of the San Mateo Bridge abutments where the southbound and northbound connector ramps parallel I-5 and pass under Basilone Road to San Onofre Creek.*
>
> *At San Onofre Creek, the southbound and northbound connectors begin to merge and diverge, respectively, from I-5. The existing I-5 bridges over San Onofre Creek will be widened to accommodate the connectors. Both the merging southbound connector and the diverging northbound connector extend approximately 4,000 feet south of San Onofre Creek.*
>
> *The construction of the SR-241/I-5 connectors will also include the relocation of existing conflicting utility facilities. All utility relocations will be accomplished within the disturbance limits evaluated in the EIS/SEIR.*

TCA's Response to CCC Report, p. 1, also states that the initial construction of the project is limited to 4 lanes, rather than the 6 lanes ultimately contemplated. The Commission agrees with TCA that the Commission would have the authority to review the additional two lanes when they are proposed for construction. The project description above (p. 13) recognizes the initial 4-lane proposal. However, an understanding of the footprint of the ultimate buildout to six lanes is critical to analyzing the project's effects on habitat, recreation, and other coastal zone effects, and to an understanding of the project's cumulative effects (which is required under Section Section 30250 of the Coastal Act, and under the California Environmental Quality Act (CEQA) § 21083(b)(2) and CEQA Guidelines § 15130). It is therefore appropriate to consider and describe the ultimate project's overall impacts.

B. <u>Purpose and Need</u>.
The primary impetus for the Orange County toll roads is reduction of traffic congestion. TCA states (FSEIR):

> *The purpose of the SOCTIIP* [FTC-S] *is to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area. The Preferred Alternative meets this purpose because it provides the number of traffic lanes necessary to meet forecasted traffic demand through 2025, which is the design forecast year for the SOCTIIP and the planning horizon year for regional plans and socioeconomic forecasts. The Preferred Alternative also meets the purpose because it accommodates the need for mobility, access, and goods movement by providing increased traffic capacity and because it provides an alternative route to I-5.*

> *One of the project purposes is to improve the projected future level of service (LOS) and reduce the amount of congestion and delay on the freeway system and, as a secondary objective, the arterial network, in southern Orange County. The overall goal is to improve projected levels of congestion and delay as much as is feasible and cost-effective. This may include strategies that lead to a reduction in the length of time LOS F will occur, even if the facility will still operate at LOS F for a short period of time, if the strategy will result in benefits to the traveling public and more efficient movement of goods by reducing total delay. The Preferred Alternative furthers this objective by increasing overall regional capacity and reducing congestion on I-5 and local arterials.*

C. <u>Background</u>.

The Transportation Corridor Agencies (TCA) consist of the Foothill/Eastern Transportation Corridor Agency and the San Joaquin Hills Transportation Corridor Agency. TCA was established in 1986 by joint powers agreements among the Orange County and 15 cities in the County to plan, design, finance, and build regional transportation facilities. The two agencies are governed by separate governing boards, consisting of elected officials from the County and the agency cities. The two corridor agencies are together responsible for the planning, financing, designing, and construction of the planned 67 mile toll road system. The Foothill/Eastern TCA governing Board is composed of representatives from the Cities of Dana Point, San Clemente, Anaheim, Irvine, Lake Forest, Mission Viejo, Orange, Rancho Santa Margarita, San Juan Capistrano, Santa Ana, Tustin, and Yorba Linda, as well as Orange County supervisors representing the Third, Fourth, and Fifth Districts.

TCA has built 51 miles of the toll road system, which is currently open to traffic, including approximately 20 miles of SR-241. The Commission concurred with TCA's consistency certification for the San Joaquin Hills Transportation Corridor (SR-73) in 1992 (CC-063-92). Fully outside the coastal zone, and not reviewed by the Commission, TCA has built the Foothill/Eastern Transportation Corridor (SR-91), and the FTC-N (SR-241). The FTC-S would complete the currently planned toll road system.

TCA's consistency certification states:

> ***Project Background.*** *Planning efforts for FTC-S have been underway for approximately 20 years by local, regional, and state transportation agencies. In 1981, the County of Orange evaluated alternative general alignments and other alternatives to meet project need and certified Final EIR No. 123. The County of Orange then added FTC-S to the Master Plan of Arterial Highways (MP AH). The Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG) evaluated alternatives to FTC-S as part of their evaluation of SCAG and SANDAG regional transportation plans.*
>
> *Between 1989 and 1991, the TCA prepared TCA EIR No.3, which, in 1991, adopted a locally preferred alternative for the project known as the "CP" alignment. In December*

1993, the TCA initiated the preparation of a Subsequent EIR (SEIR) to evaluate the CP Alignment against other alternatives and a No Build Alternative. Subsequent to this effort, the project participated in a process consistent with the NEPA/Section 404 Memorandum of Understanding (MOU). The NEPA/Section 404 MOU provides for federal resource agency coordination in identifying the project Statement of Purpose and Need, selecting Alternatives for evaluation, and agreement of the Preferred Alternative leading to identification of the Least Environmentally Damaging Practicable Alternative (LEDPA). The federal agencies that participated in this integration process (U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Federal Highway Administration, Caltrans, and the U.S. Marine Corps) are collectively referred to as the "SOCTIIP Collaborative" and, together, the Collaborative developed the project Alternatives evaluated in the Draft EIS/SEIR.

During the course of Phase I of the SOCTIIP Collaborative process (August 1999-November 2000), the Collaborative developed a list of alternatives for evaluation in the SOCTIIP NEPA and Section 404 process. The Phase I Collaborative identified several Alternatives for evaluation. It was during this time that the Central Corridor-Complete (CC-Alternative, previously referred to as the BX Alternative) and the Far East Alternative (CP Alternative) were evaluated to determine optimal alignments. The TCA/FHWA defined the Alignment 7 Corridor Alternative (A7C Alternative) as an alternative to the CC Alternative to avoid and/or reduce impacts to the significant biological resources in the upper and middle Chiquita areas. The A7C-Alternative represents a shift to the east to move the alignment out of Canada Chiquita including its primary drainage course and to avoid the wetlands area at the confluence of Canada Chiquita and San Juan Creek, and at the Segunda Deshecha wetlands complex. Additionally, this shift minimized impacts to sensitive habitat including coastal sage scrub. Similarly, other Alternatives to the CC Alternative were created (i.e., Alignment 7 Corridor Swing Variation (A7C-7SV) Alternative, the Alignment 7 Corridor-Far East Crossover Variation (A7C-FECV) Alternative and the Alignment 7 Corridor Ortega Highway Variation (A7C-OHV) Alternative). The A7C Alternatives and its variations were created as Alternatives to the CC Alternative. See Table 1, History of FTC-S Alternatives.

In November 2000, the SOCTIIP Collaborative concurred on the Alternatives to be evaluated in the technical studies supporting the Draft EIS/SEIR. The Collaborative agreed to 24 Alternatives for evaluation in the technical analysis. These include 20 toll road Alternatives, 2 non-toll road Alternatives and 2 no action Alternatives. During Phase II of the SOCTIIP Collaborative (January 200l-Present), the TCA sought to further refine the alternatives to minimize impacts to sensitive environmental resources as described in the Final SEIR. FTC-S is the adopted alignment described in the Final SEIR.

D. <u>Non-Competition Agreement</u>.

To maintain toll revenues and assure its ability to market bonds to pay for the proposed toll road,

TCA and Caltrans have entered into an agreement discouraging Caltrans from "competing" with the proposed toll road. Accordingly, this agreement (Agreement 12-210, Section 2.1.6) provides that:

> *Non-Competition*
> *(a) [The STATE (i.e., Caltrans) agrees that it] … shall use its best efforts to exercise its discretionary power to support [the proposed] PROJECT and, except as specifically authorized in this Section 2.1.6, STATE shall refrain from exercising that discretionary authority relative to initiating, supporting or approving any Capital Project on the State Highway System within the Non-Competition Zone which would have the purpose or reasonably foreseeable effect of significantly adversely affecting AGENCY's [i.e. TCA's] toll operations.*
>
> *(b) … STATE shall not construct, operate, assist or support, directly or indirectly, and shall exercise all discretionary authority available to it under applicable law to persuade other governmental or private entities, directly or indirectly, from constructing any STATE highway Capital Projects or improvements, realignments or enhancement of STATE highway projects within the Non-Competition Zone which would principally run parallel to the PROJECT, which would reasonably be expected to have any adverse effect on PROJECT tolls and which would become operational prior to the year 2020 or the earlier termination of this agreement except for: … [projects in the 1992 State Transportation Improvement program (STIP), improvements approved by local initiative (Measure M, in 1990), safety and maintenance improvements, adopted 1992 County Congestion Management Plan improvements, high speed rail projects, HOV lanes required by regulatory agencies, and exclusive I-5 HOV lanes between Avenida Pico and State Route 1.*

If Caltrans fails to abide by this agreement, Caltrans has agreed it would be required to compensate TCA for any reductions in toll revenues attributable to any such competition, "as determined by a mutually agreed toll revenue consultant." The Non-Competition Zone runs 5 miles on either side of the proposed toll road and is shown in Exhibit 12.

E. Applicant's Consistency Certification.
The Foothill/Eastern Transportation Corridor Agency (TCA) certifies that the proposed activity complies with the federally approved California Coastal Management Program and will be conducted in a manner consistent with such program.

F. Staff Recommendation and Motion.
The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with the Foothill/Eastern Transportation Corridor Agency's (TCA's) consistency certification CC-018-07 that the project described therein is consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **NO** vote on the motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Object to Consistency Certification:

The Commission hereby **objects to** the consistency certification by the Foothill/Eastern Transportation Corridor Agency, on the grounds that the project described therein is inconsistent with the enforceable policies of the CCMP.

II. Procedures

A. Need for Consistency Certification.

Section 307(c)(3) of the Coastal Zone Management Act provides:

> *(3) (A) After final approval by the Secretary of a state's management program, any applicant for a required Federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program. … No license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification or until, by the state's failure to act, the concurrence is conclusively presumed, unless the Secretary, on his own initiative or upon appeal by the applicant, finds, after providing a reasonable opportunity for detailed comments from the Federal agency involved and from the state, that the activity is consistent with the objectives of this title or is otherwise necessary in the interest of national security.*

The proposed toll road requires a number of federal agency approvals and authorizations, including (1) a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act for fill of waters of the U.S., (2) an interchange approval from the Federal Highway Administration pursuant to the U.S. Highways Code 23 U.S.C., Section 111 (Federal Highway Act), and (3) an incidental take permit from the U.S. Fish and Wildlife Service pursuant to Section 10 of the Endangered Species Act.

The distance inland to the coastal zone boundary in the affected area on northern Camp Pendleton ranges from approximately 1/7 to 1/3 mile inland from I-5. The portions of the project within the coastal zone on Camp Pendleton are the 0.8 miles of improvements parallel and adjacent to I-5, between San Mateo Creek and 4000 ft. south of San Onofre

III. Findings and Declarations.

The Commission finds and declares as follows:

A. Environmentally Sensitive Habitat.

Coastal Act § 30240 states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act section 30107.5 defines environmentally sensitive area:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

The Coastal Act thus establishes a high standard for protection of areas that are identified as environmentally sensitive. Only resource-dependent uses, such as habitat restoration, are allowed within an environmentally sensitive area (ESHA), and all development within or adjacent to an ESHA must be sited and designed to prevent significant disruption of ESHA.

Under the Coastal Act, if an ESHA is identified, it must be avoided unless the proposed development is "a use dependent on the resource." This fundamental requirement of the Act was confirmed in the *Bolsa Chica* case, wherein the Court found:

> *Importantly, while the obvious goal of section 30240 is to protect habitat values, the express terms of the statute do not provide that protection by treating those values as intangibles which can be moved from place to place to suit the needs of development. Rather, the terms of the statute protect habitat values by placing strict limits on the uses which may occur in an ESHA....*

With respect to a Coastal Act policy interpretation raised in *TCA's Response to CCC Report*, p. 47 (footnote 15), TCA maintains that the Commission's application of Sections 30233 and 30340 of the Coastal Act, is discretionary, and if the Commission were to apply them, section 30512.2(b) of the Coastal Act (and of the CCMP) requires the Commission to do so only to the extent necessary to achieve compliance with one or more of the legislative goals set forth in Section 30001.5 of the Coastal Act. The

Commission disagrees. Under the Coastal Act, and thus the CCMP, Section 30512.2 by its express terms applies only to Commission reviews of Local Coastal Programs, and not to the application of Chapter 3 policies generally (including federal consistency reviews).

Defining ESHA

ESHA, as defined in Section 30107.5 of the Coastal Act, is "…any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities." Thus, Section 30107.5 sets up a two part test for determining what constitutes ESHA. The first part is determining whether an area includes plants, animals or their habitats that are either: (a) rare; or (b) especially valuable because of their special nature or role in an ecosystem. If so, then the second part asks whether such plants, animals, or habitats could be easily disturbed or degraded by human activities. If so, then the area where such plants, animals, or habitats are located is deemed ESHA by Section 30107.5.

Defining "rare"

There are several types of rarity, but each of them is fundamentally related to threats to the continued existence of species that naturally occur in larger or more widespread populations. Increasing numbers of species have become absolutely rare, having been reduced to a few hundreds or thousands of individuals. The prognosis for these species is very poor. Another common pattern is for species to be globally rare but locally abundant. Such species only occur at a few places either as a result of natural processes or human perturbations. The remaining populations of tidewater goby and coastal California gnatcatcher, for example, appear to be constrained in their natural distribution as a result of widespread loss of suitable habitat areas. Some species, such as the Pacific pocket mouse, are characterized as "narrow endemics" because they have evolved adaptations to a very limited range of environmental variables (e.g., soil type, temperature, humidity, availability of shelter and forage species etc.), which restrict their spatial distribution. Many other species, such as the least Bell's vireo and San Diego fairy shrimp, have restricted distributions as a result of human activities, especially agricultural and urban development that results in habitat loss. Many natural endemics have also suffered such habitat loss – compounding the risk to them. All these species may be abundant in the few areas where they still occur. However, regardless of the cause of their restricted distribution, the survival of these species is at elevated risk because localized impacts may affect a large proportion of the population with devastating effects. At the other end of the spectrum of rarity are species such as steelhead that are geographically widespread, but are everywhere in low abundance. Some species naturally occur in this pattern and have life-history characteristics that enable them to persist. However, naturally abundant species that have been reduced to low density throughout their range are at heightened risk of extinction, although their wide distribution may increase their opportunities for survival.

Defining "especially valuable"

All native plants and animals and their habitats have significant intrinsic value. However, the "especially valuable" language in the Coastal Act definition of ESHA makes clear that the intent is to protect those species and habitats that are out of the ordinary and special, even though they may not necessarily be rare. As in all ESHA determinations, this requires a case-by-case analysis. Common examples of habitats that are especially valuable due to their role in the ecosystem are those that support rare, threatened, or endangered species, and those that provide important breeding, feeding, resting or migrating grounds for some stage in the life cycle of animal species and that are in short supply (e.g., California sage scrub provides forage and nesting habitat for the coastal California gnatcatcher, vernal pools supporting fairy shrimp and coastal lagoons and estuaries provide nursery habitat for steelhead and the tidewater goby). Habitats may also be especially valuable because of their special nature. Examples include those rare instances of communities that have remained relatively pristine, areas with an unusual mix of species, and areas with particularly high biological diversity (vernal pools for example).

Site Specific ESHA Analyses

The reason ESHA analyses are all site-specific is that there is no simple rule that is universally applicable. For example, a plot of a rare habitat type that is small, isolated, fragmented and highly degraded by human activities would generally not meet the definition of ESHA because such highly impacted environments are so altered that they no longer fit the definition of their historical habitat type. Larger, less isolated, more intact areas that are close to or contiguous with other large expanses of natural habitat are more likely to have a special nature or role in an ecosystem and hence meet the ESHA definition, but "large," "isolated," "intact," and "close to" are all terms that are relative to the particular species or habitat under consideration. What is spatially large to a Pacific pocket mouse is small to a mountain lion or bald eagle. What is isolated for a dusky footed woodrat may not be for a coastal California gnatcatcher. Similarly, an area supporting one or a few individuals of a rare species might not meet the definition of ESHA because scattered individuals might be common and not significant to the species. However, this is relative to the actual distribution and abundance of the species in question. If a few individuals of a species previously thought to be extinct were found, the area would clearly meet the definition. Whereas, if the same number of individuals of a species with a population of 25,000 were found in an isolated, degraded location, the area would probably not meet the definition. A conclusion of whether an area meets the definition of ESHA is thus based on a site- and species-specific analysis that generally includes a consideration of community role, life-history, dispersal ability, distribution, abundance, population dynamics, and the nature of natural and human-induced impacts. The results of such analysis can be expected to vary for different species.

Case-by-case analysis of ESHA necessarily occurs at discrete moments in time. However, ecological systems and the environment are inherently dynamic. One might expect, therefore, that the rarity or sensitivity of species and their habitats will change

over time. For example, as species or habitats become more or less abundant due to changing environmental conditions, they may become more or less vulnerable to extinction. In addition, our scientific knowledge and understanding of ecosystems, specific species, habitat characteristics and so forth is always growing. Large numbers of new species are discovered every year. The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California grew from approximately 1400 listings in 1974 to over 2100 listings in 2001. New legal requirements, such as the numerous environmental laws adopted in the 1970s, may be adopted that reflect changes in our values concerning the current conditions of natural resources. Consequently, ESHA evaluations may change over time. Areas that were once not considered ESHA may become ESHA. It is also possible that rare species might become less so, and their habitats may no longer be considered ESHA. Because of this inherent dynamism, the Commission must evaluate resource conditions as they exist at the time of the review, based on the best scientific information available.

The analysis included above is questioned in *TCA's Response to CCC Report* (page 12), which states:

> *Under the subheading "Site Specific ESHA Analyses," Coastal Commission staff implies that the value now placed on these resources would influence the Commission's implementation of the law (p. 26). However, the Coastal Commission staff reject's the "values"—professional opinions—of those State and federal agencies that are mandated by law and whose expertise it is to protect sensitive species. As documented below, staff asserts, by implication, that its own opinion about species' status and habitat needs and project impacts deserve greater weight that that of these agencies. For example, the report defines as an ESHA any area within the coastal zone portion of the proposed project area that is currently or has been previously designated as critical habitat by the U.S. Fish and Wildlife Service. The USFWS, the agency that regulates critical habitat designations for federally listed species, has in several instances determined that a critical habitat designation is no longer appropriate – based primarily on the determination that existing conservation planning actions provide protections to species at a higher level than that afforded by the designation of critical habitat – and has removed such designation. Yet staff fails to acknowledge that USFWS's regulations constitute "best scientific information available," which the Coastal Commission states is the standard for their analysis (p.26). To meet its standard of basing ESHA determinations on the most current scientific information available, Coastal Commission staff should observe the expert agency's regulations, which are prepared by agency staff and subject to peer review and public notice and comment.*

As demonstrated by the Commission's extensive quoting (pages 36, 37, 43, 44, 45, 50, 51, 52, 53, 54, 57, 58, 59, 63, 64, 69, 70, 71, 74, 80, 81 and 99 of this report), careful review of and substantial reliance on extensive documents, studies, critical habitat

designations and Endangered Species Act listings released by USFWS, CDFG and NOAA/NMFS over the past several decades regarding the sensitive species and their habitats located within the proposed project area, the opinions and findings released by these federal and state agencies factored heavily in Commission analysis.

Furthermore, TCA's assertion that "the [staff] report defines as an ESHA any area that is currently or has been previously designated as critical habitat by the U.S. Fish and Wildlife Service" is similarly inaccurate and taken out of context. The complete statement referred to by TCA in this quotation can be found on page 34 of this staff report and continues, "…due to the recognized and established presence of federally listed threatened or endangered species and/or the importance of these areas to the conservation of threatened or endangered species also qualify as environmentally sensitive habitat areas, ESHA." In other words, insofar as USFWS critical habitat designations function as a proxy for the indisputable presence of sensitive species within a habitat area and the importance of that habitat area for the conservation and recovery of that species, those critical habitats may also be considered ESHA.

TCA's assertion that those critical habitat areas from which USFWS has subsequently removed the critical habitat designation should therefore also not be considered as ESHA misses the point raised above. Although several of the areas previously determined to be critical habitat by USFWS within the proposed project's disturbance footprint have subsequently had this designation removed, none of the decisions to remove the critical habitat designation were based on the absence of sensitive species or a reconsideration of the importance of the area for the conservation and recovery of the species for which the habitat was determined to be critical. Because those are the only pertinent factors of a critical habitat designation that are relevant to the Commission's consideration of ESHA, the removal of a critical habitat designation that is not solely based upon those factors is not relevant to the Commission analysis. As noted by TCA above, in those instances when USFWS "has determined that a critical habitat designation is no longer appropriate, [that decision has been] based primarily on the determination that existing conservation planning actions provide protections to species at a higher level than that afforded by the designation of critical habitat" and has not been based on the determination that sensitive species no longer exist within the habitat area or that the habitat is no longer critical for the species in question. Furthermore, as this statement also demonstrates, the motivation of USFWS in removing the critical habitat designations for several of the species located within the proposed project's disturbance footprint was to "provide protections to species at a higher level than that afforded by the designation of critical habitat." In other words, USFWS considers these areas worthy of a higher level of protection than that which they can provide.

Federally Designated Critical Habitat as ESHA

The definition of environmentally sensitive area in Section 30107.5 of the Coastal Act shares a common focus with the Endangered Species Act definition of critical habitat for those species listed as threatened or endangered. Specifically, critical habitat for a

threatened or endangered species is defined in section 3(5)(A) of the Endangered Species Act (ESA) as:

(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and

(ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Additionally, the term "endangered species" is defined in the ESA as “any species which is in danger of extinction throughout all or a significant portion of its range” and the term "threatened species" is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”

In other words, critical habitat includes those habitat areas in which species imminently or foreseeably at risk of becoming extinct are located that may require special protection and that are essential to the conservation of those species; or those areas not directly occupied by threatened or endangered species but that otherwise have been determined to be essential for the existence of those species.

This definition of critical habitat is similar to the Coastal Act definition of ESHA because endangered and threatened species can, by definition, also be expected to be rare. This common focus on rare species would ensure that those portions of critical habitat so designated due to the presence of a threatened or endangered species would also qualify as ESHA. Additionally, it is often true that those species listed, protected and designated with critical habitat under the Endangered Species Act are recognized as being under imminent threat of extinction due to human induced habitat loss or degradation, or, as stated in the Coastal Act definition of ESHA, “easily disturbed or degraded by human activities.”

For those areas determined to be critical habitat due to the second provision of the critical habitat definition, “specific areas outside the geographic area occupied by a species at the time it is listed” but determined to be “essential for the conservation of the species” it can reasonably be assumed that these areas meet the ESHA definition’s meaning of “especially valuable based on their special nature or role in an ecosystem” due to the recognized importance of these areas to the conservation of a species threatened with extinction and the often critical role that endangered species play in the ecosystems that support them. Thus, although the Commission is not limited to designated critical habitats when defining ESHA, the Commission can rely on critical habitat designations as one of the components supporting an ESHA determination.

As detailed below, the Commission finds that those areas within the coastal zone portion of the proposed project area that are currently or have previously been specifically designated as critical habitat by the U.S. Fish and Wildlife Service (FWS) due to the recognized and established presence of federally listed threatened or endangered species and/or the importance of these areas to the conservation of threatened or endangered species also qualify as environmentally sensitive habitat areas, ESHA.

Project Description

The proposed temporary and permanent development of approximately 138 acres[6] within the coastal zone portion of the project area, including a substantial amount of undeveloped open space within one of the largest and least developed coastal valleys in southern California, has the potential to adversely affect a large number of the sensitive and unique species and habitats that exist within this area, including approximately 50 acres[7] of federally designated critical habitat for species that are listed as threatened or endangered under the federal Endangered Species Act. The proposed use of heavy equipment and machinery for extended periods of time to achieve the amount of grading, cut, and fill of soil required to construct the proposed four lane toll road would result in elevated noise levels for prolonged periods, remove habitat and destroy or dislocate many species of plants and animals that currently exist within the project's disturbance limits, including currently or previously designated critical habitat for four federally listed threatened or endangered species and occupied habitat for several other sensitive and protected species. In addition, the proposed expansion of existing bridges and placement of additional elevated bridge structures would require pilings and support structures to be placed within and in close proximity to the sensitive wetland areas of San Onofre Creek and San Mateo Creek, thus subjecting these environmentally sensitive habitat areas and the species that they support to potential adverse affects associated with noise, vibration, fill, sedimentation, degraded water quality and other similar disturbances associated with the movement and use of construction equipment, personnel and materials. The following discussion will detail the types and locations of sensitive species and environmentally sensitive habitat areas within the project area and analyze the extent to which these terrestrial biological resources may be affected by the proposed project.

In addition to potential impacts to ESHA, as explained below, the proposed project also has the potential to adversely affect and compromise the continued survival of at least six species with federal designations under the Endangered Species Act. Potential impacts to these species resulting from the proposed project are also detailed below.

On page 10 of *TCA's Response to CCC Report*, TCA has taken issue with references underlying the analysis and discussion of potential impacts included below by stating:

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[6] Personal communication from Glenn Lukos Associates (TCA) on September 11, 2007: "The total area of CCC jurisdiction that falls within the disturbance limits is approximately 138 acres."

[7] This estimate is based on the amount of federally designated critical habitat for federally listed threatened or endangered species located within the disturbance limits of the proposed project as demonstrated in the revised Exhibit 15 and was calculated by staff of the Commission's Technical Services – Mapping Unit.

> *Moreover, despite the fact that over 50 professional biologists have been collecting and analyzing data from the project area for over 20 years, with thousands of hours spent in the field, staff chose not to contact any of these experts to discuss site conditions or research and data collection efforts.*

However, as demonstrated by the 11 pages and 130 separate citations included in the staff report's substantive file documents, Commission analysis made use of a wide range of scientific reports, scholarly journal articles, studies and research conducted by several hundred biologists and noted experts. Contrary to TCA's assertions, Commission staff had personal communications with many of the "professional biologists [that] have been collecting and analyzing data from the project area" when necessary to clear up disputes or answer additional questions but more commonly and appropriately made use of the dozens of peer reviewed and published findings released by these individual researchers.

TCA's Response to Staff Report (page 10) continues its general attempt to discredit and undermine the Commission staff's analysis by quoting a letter to the Commission staff written by TCA consultant Dr. Dennis Murphy which states:

> *The core of the staff report on sensitive species is a highly selective interpretation and reinterpretation of available observations and data, and is obviously designed to build a singular case against the toll road project – in essence, a categorical cherry picking from the standing base of information on the status and trends of species of concern, on species uses and reliance on specific habitat associations and resources, and on possible species and habitat responses to proposed and potential mitigation and management actions.*

The Commission has relied on all available information and research. As demonstrated on the subsequent pages, this research has established the presence of seven special status species and their vital habitat within and directly adjacent to the proposed project's disturbance limits and therefore contributed heavily to the Commission's determination that 50 acres of ESHA exist within the proposed project's disturbance footprint.

Pacific Pocket Mouse

The Pacific pocket mouse (*Perognathus longimembris pacificus*) is a critically endangered species of small mammal that is only found within 2.5 miles of the coast on fine-grained sandy substrates in coastal sage scrub, coastal strand, and river alluvium. The species remains one of the most endangered animals in the United States and was provided with an emergency federal Endangered Species Act listing in February of 1994 following the discovery of a single population on the Dana Point Headlands. Prior to this re-discovery, the Pacific pocket mouse had been assumed to have gone extinct approximately 20 years earlier. At the time of the emergency designation in 1994, the global Pacific pocket mouse population was known to consist of no more than 39 individuals at one location despite intensive surveys of all remaining, undisturbed locales

where this species historically occurred. Upon expiration of the emergency listing, the Pacific pocket mouse (henceforth referred to as pocket mouse) was federally listed as endangered in September of 1994 and two additional populations were discovered within MCB Camp Pendleton during small mammal surveys conducted in 1995. Of these three known populations, one occurs within and adjacent to the proposed project area. This population is comprised of two occupied areas immediately to the north and south of San Mateo Creek, referred to as the San Mateo North and San Mateo South pocket mouse sites, respectively.

Despite the well recognized and established presence of the pocket mouse at only three general areas within Orange and San Diego counties, FWS has not designated critical habitat for this species. The basis for this decision, as described in a September 2000 petition to designate critical habitat for the pocket mouse jointly submitted by the Natural Resources Defense Council, Endangered Habitats League and Center for Biological Diversity to FWS, was that:

> *When the Service listed the Pacific pocket mouse as an endangered species in 1994, it declined to designate critical habitat, determining that to do so would not be "prudent." Specifically, the Service concluded that designating critical habitat for the Pacific pocket mouse (1)would lead to an increased threat to the species through the publication of maps identifying the location of the sole Pacific pocket mouse population then known to exist; and (2) would not provide any conservation benefit to the species because the only population then known was located on private property that lacked a "federal nexus" subjecting it to the critical habitat provisions of the ESA.*

Because these select locations provide the only known habitat and viable populations for the pocket mouse, their importance to the conservation of the species and its protection from extinction is well recognized. The *Recovery Plan for the Pacific Pocket Mouse* produced by FWS in 1998, details the vital nature of existing population locations:

> *The immediate recovery goal is to avert the extinction of the Pacific pocket mouse by focusing on short-term strategies to improve the subspecies' prospects for survival. <u>Foremost among these are the immediate protection and restoration of existing populations and the habitat of the subspecies</u>. Considering the extremely small population size of the Pacific pocket mouse (fewer than 150 individual animals were detected from 1993 to 1997) and the fragmentation and depletion of the coastal strand, river alluvium, and coastal sage scrub habitats upon which the subspecies depends, <u>further losses of occupied or potential habitat would seriously reduce the probability of the persistence of the subspecies</u>. Given the small sizes of the populations at the three known extant locales, the apparent sedentary nature of the subspecies (Meserve 1972), and the severe fragmentation and diminution of the subspecies' habitat, the Pacific pocket mouse is highly*

> *susceptible to extinction as a result of environmental or demographic factors alone (see Mace and Lande 1991).*
>
> *Unless, or until sufficient, additional viable populations are discovered and/or established and protected, <u>it is imperative that existing populations be protected and expanded through active management. Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies' survival. All known extant populations are essential</u>, including the Dana Point Headlands population (Boggs 1997, Buck 1997, Price 1997, Silver 1997, Silver and Drumm 1996, Soule' 1996).* [emphasis added]

Although the pocket mouse has not been directly observed during TCA's biological surveys within the coastal zone portion of the project area, as detailed in the two memoranda from Commission ecologist Dr. Engel - Exhibit 13 to the January 17, 2008, staff report and Exhibit 1 to the January 30, 2008, second addendum to that recommendation, the San Mateo North pocket mouse population site exists within an area contiguous with suitable, potentially occupied habitat within the coastal zone. As detailed in Dr. Engel's memoranda, the suitability of this habitat area within the coastal zone has been independently analyzed by the Commission ecologist and determined to qualify as habitat essential for the preservation and potential recovery of the species. This essential habitat area is graphically depicted in Attachment 1 of Dr. Engel's memorandum. As demonstrated in this Pacific pocket mouse essential habitat map, approximately 12 acres of essential habitat is within the proposed project's disturbance limits.

In addition, in an August 2005 letter to FWS, Dr. Wayne Spencer - a leading expert on the Pacific pocket mouse, determined that "the ability of the San Mateo North population to disperse and expand under favorable environmental conditions is critical to its continued survival and recovery." Dr. Spencer developed a map of those areas he considered to be "minimally essential to accommodating potential population expansions" and attached it to the 2005 letter. This map supports those independent conclusions made by the Commission ecologist regarding essential pocket mouse habitat within the coastal zone portion of the project area and is included as Exhibit 14. Dr. Spencer also notes that the proposed project would likely be the "last nail in the coffin" for the San Mateo pocket mouse population. As detailed in Dr. Spencer's comments on the FEIR, the document continues to downplay the impacts to the mouse for reasons that are biologically unsupportable. His comments also makes clear that the primary specific mitigation strategy proposed for the pocket mouse – building an undercrossing – is completely untested for this species, there being no scientific support for the idea that a small mammal would be able to use it.

As detailed by the Commission ecologist in Exhibit 13 to the to the January 17, 2008, staff report and Exhibit 1 to the January 30, 2008, second addendum to that recommendation, due to the rarity and sensitivity to disturbance of the pocket mouse,

those habitat areas within the coastal zone that support this species have been determined to qualify as ESHA. This ESHA area is graphically depicted in Attachment 1 of Dr. Engel's memorandum (Exhibit 13) and is shown to include approximately 12 acres within the proposed project's disturbance limits. Potential project related impacts to this ESHA area, the Pacific pocket mouse and the mitigation measures that TCA has proposed to offset or minimize these impacts are detailed in Dr. Engel's memoranda and include fragmentation and destruction of essential habitat due to construction and placement of the proposed toll road, increased potential for vehicle strike related mortality, the isolation of the two separate sites of the San Mateo population, increased potential for wildfires, and increased lighting of essential habitat areas (which may greatly increase predation levels).

Conclusion
For those reasons detailed in the Commission ecologist's memorandum, the proposed project would adversely affect the pocket mouse, temporarily and or permanently degrade approximately 12 acres of pocket mouse essential habitat/ESHA and would likely contribute to the local extirpation of this species from the project area – thereby greatly increasing the probability of its eventual extinction. The Commission therefore finds the proposed project inconsistent with the resource protection requirements contained in Section 30240 of the Coastal Act, both because it is not a resource dependant use, and because it does not protect the pocket mouse from significant disruption of its habitat.

Tidewater Goby
The tidewater goby (*Eucyclogobius newberryi*) is a small benthic fish native to California's coastal estuaries and best known from enclosed lagoons near the mouths of coastal streams and the brackish waters adjoining these marshes and streams. The tidewater goby is unique among North American fishes due to its narrow adaptation to brackish water, a rare condition among fishes, and its ability to construct vertical burrows in the sandy substrate of its habitat.

As discussed in much of the scientific literature regarding the tidewater goby, populations throughout the state (but especially in southern California) have suffered serious declines over the past several decades due to habitat losses and alterations. With the loss of roughly 80% of California's coastal wetlands, the tidewater goby had been extirpated from all but fifty locations by 1990, prompting the U.S. Fish and Wildlife Service to designate the tidewater goby as endangered throughout its historic range in California in 1994. As required under the federal Endangered Species Act, critical habitat for the tidewater goby was designated in Orange and San Diego counties in November of 2000 and a final recovery plan was adopted in December of 2005. The U.S. Fish and Wildlife Service (FWS) explains the rationale behind limiting the designation of tidewater goby critical habitat to these two counties in the November 2000, *Designation of Critical Habitat for the Tidewater Goby*, by stating that, "We have limited our designation to Orange and San Diego Counties, because it is within this area that tidewater gobies are threatened with extinction and essential habitat areas for this species can be identified."

The designated critical habitat area for the tidewater goby in Orange and San Diego counties is comprised of portions of ten coastal streams and creeks totaling approximately nine miles of riparian habitat. According to the U.S. Fish and Wildlife Service's December 2005, *Recovery Plan for the Tidewater Goby*, "Critical habitat includes the stream channels and their associated wetlands, flood plains, and estuaries. These habitat areas provide for the primary biological needs of foraging, sheltering, reproduction, and dispersal, which are essential for the conservation of the tidewater goby."

Included within the designated critical habitat are several areas within the project footprint, namely San Mateo Creek and its associated lagoon and marsh (from the Pacific Ocean to approximately 0.9 miles upstream) and San Onofre Creek and its associated lagoon and marsh (from the Pacific Ocean to approximately 0.4 miles upstream). The tidewater goby critical habitat along these creeks includes the current creek bed as well as all upland or riparian areas within the 50-year floodplain of these creeks. In areas where the 50-year flood plain is not delineated, the presence of alluvial soils (soils deposited by streams), obligate and facultative wetland vegetation, abandoned river channels, or evidence of high water marks were used to determine the extent of the flood plain and the boundaries for the designation. The extent of the tidewater goby designated critical habitat within the coastal zone portion of the project area is shown in Exhibit 15. This area includes approximately 24 acres within the proposed project's disturbance limits, as delineated by TCA and calculated by the Commission staff based on FWS designated critical habitat.

Surveys conducted by TCA and referenced in the document titled *Focused Summary of Environmental Impacts in the Coastal Zone*, support the continued presence of the tidewater goby within the coastal zone portion of its critical habitat area. Specifically, in this document, TCA states that:

> *Populations of the tidewater goby in San Diego County exist in the San Mateo [and] San Onofre…lagoons. A large population of tidewater gobies (137) was observed in San Mateo Lagoon, and one individual was caught in San Mateo Creek during the 1995 survey. In addition, a population of approximately 10,000 individuals is present in San Onofre Lagoon in the [toll road] study area. There is potential for this species to be affected during construction of the bridge structures over San Mateo and San Onofre Creek.*

Because of the critical population status of the tidewater goby and the requirements and rationale behind the designation of its critical habitat, the Commission finds that the final designated critical habitat for this species within the coastal zone portion of the project area, as represented in Exhibit 15 and described in the November 2000 *Designation of Critical Habitat for the Tidewater Goby*, meets the Commission definition of environmentally sensitive habitat area (ESHA). Due to the affinity of this species for riparian habitat and its recorded location among these habitats within the project area,

areas designated as ESHA by the Commission ecologist due to their importance for the tidewater goby have also been identified as wetlands and critical habitat/ESHA for the least Bell's vireo and arroyo toad (as discussed below). These wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

Potential Effects on ESHA and Tidewater Gobies
As stated by TCA in the project EIS, approximately 29 acres[8] of tidewater goby critical habitat exists within or directly adjacent to the proposed project's designated disturbance limits within the coastal zone. Proposed project activities within this area include the construction of an access road along San Mateo Creek and under the north- and south-bound toll road connectors and the existing I-5 freeway, the construction of two several hundred foot long retaining walls (to facilitate the placement of this access road), the placement of several thousand feet of elevated, multi-lane north- and south-bound toll road connectors, the use of a pile driver to anchor and reinforce support structures for the elevated connectors, the extension and support of existing bridges along I-5 and the associated placement, positioning, removal and use of heavy machinery including graders, earthmovers, pile drivers, cement pourers, cranes, and material transport trucks. These activities are anticipated to be carried out over the span of approximately three years and have the potential to adversely affect the tidewater goby in a variety of ways.

Although much of the proposed toll road would be elevated above the critical habitat area, TCA has estimated that the pilings and support structures would permanently displace approximately 0.16 acres of wetlands and tidewater goby habitat. In addition to the obvious detrimental effects associated with this proposed placement of permanent structures within critical habitat areas and the corresponding loss of current and future fish habitat, the proposed activities also involve substantial amounts of soil disturbance, earth moving and vegetation clearance as well as the temporary occupation of critical habitat areas for construction equipment, material and personnel staging. These activities would occupy approximately 29 acres of wetlands and tidewater goby critical habitat within the coastal zone and nearly 109 additional acres[9] within the coastal zone. Prolonged construction activities have the potential to increase the amount of sediment entering the San Mateo and San Onofre Creeks and their associated lagoons through the settlement of dust as well as potential increases in wind and waterborne erosion of sediments into the creek and lagoon areas. Furthermore, the proposed project involves extensive use of construction equipment and heavy machinery that have the potential to release materials that could contaminate the air, water and sediment in and around tidewater goby critical habitat. The project EIS provides additional details regarding some of the potential threats to the tidewater goby associated with the proposed project by stating that, "if construction occurs during the breeding season, construction activities

[8] As detailed in Table 4.12-4A of the project EIS; this number closely matches Commission staff's more refined estimate of 24.22 acres.
[9] Personal communication from Glenn Lukos Associates on September 11, 2007: "The total area of CCC jurisdiction that falls within the disturbance limits is approximately 138 acres."

would result in a disruption of breeding activities" and "physical activities in stream courses could cause additional mortality of individuals." Examples of these physical activities within stream beds are given and include the proposed placement of temporary cofferdams and draining or de-watering of portions of San Mateo Creek and lagoon to facilitate the placement of falsework and scaffolding during construction. Such activities may result in direct mortality due to removal of gobies from the water as well as the temporary loss of habitat in de-watered areas. The project EIS also states that "long-term impacts to the physical characteristics (substrate materials and creation of impediments due to upstream improvements) could also occur during the construction of the bridge/culvert structures that could affect movement of local populations."

TCA's Response to CCC Report (page 13) refutes these findings and questions the magnitude and severity of potential impacts to tidewater goby habitat by stating:

> *Critical habitat is designated for only one species within the coastal zone in the area of the project: tidewater goby. A total of approximately 130 acres of critical habitat have been designated for the goby in San Mateo and San Onofre Creeks; however, due to significant avoidance measures by TCA and FHWA, the proposed project would only result in the permanent loss of 0.011 (0.006 in San Mateo Creek and 0.005 in San Onofre Creek) acre of this area (less than 0.008 percent (eight one thousandths) of the total critical habitat designated for this species in these watersheds).*

The previous response regarding the number and relevance of currently and previously designated critical habitat areas within the project area partially addresses this issue. In addition, despite TCA's statements concerning the percentage that the proposed project's impacts would have on vital habitat areas for the federally listed as endangered tidewater goby, the fact remains that this species and its habitat will be adversely affected by the proposed project. Although TCA has chosen to focus on the restricted acreage of permanent habitat loss associated with the project, substantially more acreage exists within the proposed project's disturbance footprint and as has been clearly described in this section and noted in the project EIS/SEIR, Table 4.12-4A "Potential Impacts of the Preferred Alternative to Critical Habitat SOCTIIP," 29.3 acres (19.74 acres in San Mateo Creek and 9.56 acres in San Onofre Creek) would suffer from long-term construction related disturbance and may be rendered unsuitable for re-colonization by the tidewater goby due to the effects of landform alteration, sedimentation, shading and erosion. The project EIS/SEIR notes on page 4.12-13 that

> *Impacts to TG* [Tidewater Goby] *may occur during road improvements based on their known or reported distribution in the survey area. If construction occurs during the breeding season* [spring and summer], *construction activities would result in a disruption of breeding activities. Physical activities in stream courses could cause additional mortality of individuals. Long-term impacts to the physical characteristics (substrate materials and creation of impediments due to*

> *upstream improvements) could also occur during the construction of the bridge/culvert structures that could effect movement of local populations. Alternatives that would affect TG include FEC-M, FEC-W, and A7C-FEC-M and Preferred Alternative (Table 4.12-3).*

Therefore, the statement by TCA that the proposed project will only affect 0.011 acres of tidewater goby occupied habitat is not consistent with its acknowledgement of impacts from construction activities required to construct the bridges over San Mateo Creek and San Onofre Creek, as well as the analysis and conclusions clearly established and provided in the project EIS/SEIR.

TCA's Response to CCC Report (pages 19-20) again takes issue with the Commission's analysis, stating regarding the tidewater goby:

> *The tidewater goby is a fish that is found in the San Mateo lagoon at the ocean end of San Mateo Creek. The project has no impacts on the lagoon. Without any supporting data, the Staff Report asserts that the project will impact approximately 24 acres of tidewater goby critical habitat (pp.31-32). Coastal staff's assertion ignores the fact that the project design includes bridge spans at both the San Mateo Creek and San Onofre Creek crossings to essentially avoid impacts in these areas. The design of the bridges at San Onofre and San Mateo Creeks has significantly reduced the level of permanent impacts to just 0.011 acre. This represents less than 0.008 percent of the total critical habitat designated for this species in these watersheds. This fraction of a percentage cannot constitute "obvious detrimental effects," as stated in the Staff Report. The Staff Report's grossly overstated impacts represent a total disregard for the facts.*

Although the Commission appreciates the efforts of TCA to minimize permanent use of important tidewater goby habitat areas through bridge design refinements, the fact remains that the project EIS/SEIR clearly establishes on page 4.12-13 and Table 4.12-4A that construction of these bridges will result in the occupation and disturbance of 29.3 acres of tidewater goby habitat (the figure of 24 acres comes from the Commission's more conservative estimate of the area that would be disturbed during bridge construction), the potential mortality of gobies within these areas and the potential long-term avoidance of these areas by the tidewater goby. In addition, although TCA asserts that the tidewater goby is restricted to San Mateo Lagoon, there is no impediment to the occupation of the southern end of San Mateo Creek by the goby as well and, accordingly, surveys conducted in this section of San Mateo Creek and referenced by TCA in the document titled *Focused Summary of Environmental Impacts in the Coastal Zone*, have noted the presence of tidewater gobies within the creek. Considering the very high density of tidewater gobies within San Mateo Lagoon, surveys have indicated as many as 10,000, the presence of these fish within the creek that feeds into the lagoon is not surprising.

The size and elevated nature of the proposed toll road could also lead to additional adverse impacts to the tidewater goby by increasing shading affects on habitat below the elevated spans which could alter the character of vegetation and change the temperature profile of shaded water areas, potentially reducing the suitability of these habitats. Although the extent to which shading along the San Mateo Creek portion of designated critical habitat would affect the tidewater goby population in this area is largely unknown, the abundance and availability of prey species may change if the primary productivity of this area experiences a decline due to reduced availability of sunlight. Foraging success rates of individual gobies within shaded areas may also decline if the shading is substantial enough to affect the availability of visual cues.

The proposed use of pile driving equipment to facilitate the placement of bridge and elevated toll road supports also has the potential to result in adverse impacts to the tidewater goby. Pile driving and its unavoidable noise and vibration components, when conducted within or adjacent to water bodies, have been known to negatively affect fish and aquatic life.

In the December 2005 *Recovery Plan for the Tidewater Goby*, the U.S. Fish and Wildlife Service discusses existing and future threats to the species, including alteration of sediment flows and polluted runoff from the use of vehicles in close proximity to occupied habitat:

> *The tidewater goby is threatened by modification and loss of habitat as a result of coastal development, channelization of habitat, diversions of water flows, groundwater overdrafting, and alteration of water flows. Potential threats to the tidewater goby include discharge of agricultural and sewage effluents, increased sedimentation due to cattle grazing and feral pig activity, summer breaching of lagoons, upstream alteration of sediment flows into the lagoon areas, introduction of exotic gobies (e.g., yellowfin and shimofuri gobies) and rainwater killifish (Lucina parva), habitat damage, and watercourse contamination resulting from vehicular activity in the vicinity of lagoons.*

The vulnerability of tidewater gobies to increased sedimentation is further established by Sean Manion in a 1993 tidewater goby re-introduction study which states that "Fine silty sediments deposited and overlaying the essential coarse clean spawning sands very likely damage and reduce potential viable spawning habitat…". The study goes on to note that because "many fishes depend on good visibility to secure prey species" and turbidity or "fine sediments in prolonged suspension in the water column could create a visibility problem…," sedimentation could result in "A reduction in visibility [that] could possibly hinder visual cues and negatively impact predation and reproductive success of tidewater gobies and other fishes."

Although Section 7 of the Endangered Species Act requires TCA/FHWA to consult with the U.S. Fish and Wildlife Service (FWS) regarding the project's potential to affect

critical habitat and listed species, FWS has yet to release a Biological Opinion for this project. However, in the November 2000, *Designation of Critical Habitat for the Tidewater Goby*, the FWS considers the proposed toll road alignment through tidewater goby critical habitat areas in San Mateo Creek and San Onofre Creek. As this document describes, the proposed toll road – referred to under its previous nomenclature, the "CP alignment" – would be likely to adversely affect the continued existence of goby populations in these creeks:

> *The proposed ``CP alignment'' of the Foothill Transportation Corridor South (FTCS), if constructed, may have substantial negative impacts to the tidewater goby, specifically in San Mateo and San Onofre Creeks (Michael Brandman and Associates 1997). The lagoons at the mouth of San Mateo Creek and San Onofre Creek are both now occupied by tidewater gobies, and these two lagoons typically support large goby populations from several thousand to approximately 70,000 gobies (Swift and Holland 1998). These two populations, along with Las Flores Creek, are the largest and most persistent in the region and are thought to serve as source populations for dispersal into the ephemeral estuaries and streams in the area. Thus these populations are important to the recovery of the tidewater goby.*
>
> *The FTCS CP alignment would have both significant short-term and long-term impacts to tidewater gobies in the San Mateo Creek and San Onofre Creek drainage basins (Michael Brandman and Associates 1998). Short-term impacts would include mortality and temporary loss of habitat for breeding, feeding, and sheltering due to blockage or diversion of water flow, increased siltation from the required cut and fill of thousands of tons of earth, and the disturbance of low oxygen sediments. Long-term impacts would include: the permanent alteration of the hydrologic regime, primarily in changes to flow regimes, temperature patterns, and sediment movement characteristics of the streams; permanent loss of habitat for breeding, feeding, and sheltering due to siltation; and permanent deterioration in water quality of the streams from the continuous input of heavy metals and other contaminants. These types of changes to the abiotic elements of a stream are often associated with corresponding changes to the ichthyofauna (fish species assemblage within a region). Generally, this kind of disturbance results in an increase of exotic fish species to the detriment of the indigenous (native) ichthyofauna (Moyle and Light 1996). A preliminary investigation of the impacts to tidewater gobies from the CP alignment found that these impacts would be less than significant after mitigation (Michael Brandman and Associates 1998). However, we believe that the benefits of the proposed mitigation would be minimal and that <u>construction of the CP alignment would likely result in the loss of these populations and potentially preclude recovery for this species</u>.* [emphasis added]

TCA's Response to CCC Report (p.20) responds to FWS's analysis of the CP alignment and the Commission's inclusion of the above information by stating that:

> *The Staff Report attempts to justify its gross overstatements of project impacts by citing to the 200 final rule designating critical habitat for goby which concluded that "construction of the CP alignment would likely result in the loss of [the San Mateo and San Onofre] populations and potentially preclude recovery of this species" (p.35). That analysis is outdated; the project before the Commission is not the CP alignment (cf. p.34).*

Indeed, the project currently proposed by TCA is not the CP alignment; however, this previously proposed alignment shares many notable similarities with the proposed project and is nearly identical throughout the coastal zone portion of the project area. In addition, although TCA has indeed conducted further refinements of the proposed project subsequent to the development of the CP alignment, most obviously to the proposed bridge structures over San Mateo Creek and San Onofre Creek, much of the construction techniques and requirements are the same for both alignments and therefore many of the potential impacts can be considered to be similar in magnitude and extent. Furthermore, it can be assumed that in the analysis and conclusions made by USFWS relative to this proposed toll road project, USFWS relied heavily on information and studies related to the threats to the conservation and recovery of the tidewater goby that were subsequently consolidated in their *Recovery Plan for the Tidewater Goby*. This document discusses existing and potential threats to the species and its habitat and specifically notes that upstream alteration of sediment flows (please refer to section D of this staff report for a detailed discussion of the proposed project's potential to influence and alter sediment flows in San Mateo Creek), diversion of water flows, sedimentation, habitat modification and watercourse contamination resulting from vehicular activity in the vicinity of lagoons are paramount among the known threats to the tidewater goby and its habitat. Considering that each of these factors would be anticipated to increase substantially as a result of the proposed project and the previously proposed CP alignment, the analysis provided by USFWS in 2000 provides a valuable illustration of the potential for a project that involves substantial construction, grading and land use alteration within a relatively pristine and undeveloped watershed to adversely affect those species, such as the tidewater goby, that rely on the habitat provided within that watershed for their existence.

Despite this analysis in 2000, FWS has subsequently suggested, in a September 30, 2005, letter from FWS to FHWA, that "draft analyses" support a "preliminary conclusion" that the proposed project will result in "no adverse modification" of tidewater goby critical habitat. As stated previously, however, the FWS has yet to issue a final biological opinion regarding the proposed project's potential to adversely affect the tidewater goby.

Despite the conflicting analyses released to date by FWS regarding the tidewater goby, the project EIS concludes that the tidewater goby is one of a variety of "threatened and endangered species that would be directly impacted due to the construction and operation

[of the proposed toll road]" and that designated tidewater goby critical habitat is among several areas of "current and previously designated critical habitat for federally threatened and endangered species that would be impacted by the [proposed toll road]."

Mitigation
To address the potential impacts to threatened or endangered species that TCA has recognized would be associated with the proposed project, TCA has proposed to implement a variety of mitigation measures. These measures include both general and specific strategies that appear to be relevant to the tidewater goby. General measures include: (1) the designation of a project biologist responsible for overseeing biological monitoring, regulatory compliance, and restoration activities; (2) consideration of the project biologist's recommendations for avoidance and minimization of impacts to sensitive biological resources; and (3) development of a Biological Resources Management Plan that is proposed to provide specific design and implementation features of the biological resources mitigation measures and discusses resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements.

While these measures may have the potential to reduce the magnitude and severity of impacts to sensitive species and habitats, many of the key elements of these measures have not been provided to Commission staff. For example, measures TE-1 and TE-2 state that:

> *Measure TE-1. Prior to construction, the TCA or other implementing agencies shall designate a Project Biologist responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with construction of the selected alternative in accordance with the adopted mitigation measures and applicable law.*
>
> *Measure TE-2. During final design of the project, the Project Biologist shall review the design plans and make recommendations for avoidance and minimization of sensitive biological resources. TCA or other implementing agencies' Environmental and Engineering Staff shall determine the implementation of those recommendations.*

These measure do not described the qualifications and experience necessary for the project biologist and do not establish the authority of this individual to halt project activities that may be inconsistent with mitigation measures, applicable law or the preservation of sensitive species and habitats. Accordingly, these measures can not be guaranteed to mitigate anticipated adverse project effects on sensitive resources and ESHA.

Measure TE-3 also provides insufficient information and level of commitment to assume a reduction in impacts would occur:

Measure TE-3. A Biological Resources Management Plan (BRMP) shall be prepared prior to construction. The BRMP shall provide specific design and implementation features of the biological resources mitigation measures outlined in the resource agency approval documents. Issues to be discussed in the BRMP shall include, but are not limited to, resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements. The Draft BRMP shall be submitted to the USFWS, NMFS, CDFG, USACOE, RWQCB, FHWA, and Caltrans for review and approval to the extent required by permit by such agencies.

The primary goals of the BRMP will are to ensure (1) the long-term perpetuation of the existing diversity of habitats in the project area and adjacent urban interface zones and prevent minimize offsite or indirect effects; (2) that the project is not likely to jeopardize the continued existence of any federally listed or state-listed endangered or threatened species; and (3) impacts to endangered and threatened species are minimized and mitigated to the maximum extent practicable. The BRMP shall contain at a minimum specific construction monitoring programs for thread-leaved brodiaea, arroyo toad, coastal California gnatcatcher, least Bell's vireo, and Pacific pocket mouse.

The Biological Resources Management Plan referenced above has not been developed or provided to Commission staff for review, which makes an adequate assessment of its potential to mitigate the project's anticipated adverse effects on sensitive species and ESHA within the project area difficult. Furthermore, the measure above does not include the tidewater goby among the list of species for which monitoring programs would be developed.

The following general mitigation measures have also been identified by TCA as relating directly or indirectly to potential impacts to the tidewater goby:

Measure WV-15. Prior to final design of the selected alternative, the Project Biologist shall ensure that the location of the proposed wildlife bridges and culvert identified in the NES will provide adequate travel capabilities, contain adequate vegetation cover, have adequate daylight, and have appropriate fencing to encourage animals to use these underpasses. Upon selection of and refinement to, the selected alternative, smaller culverts and bridges that will be necessary to provide drainage and/or avoid impacts to jurisdictional areas shall also be designed, at the direction of the Project Biologist, to promote local and regional wildlife movement.

Measure WV-21. During final design, the TCA or other implementing agencies, in coordination with the RMP, shall design, construct, and/or maintain any structure/culvert placed within a stream where sensitive fish species do/may occur

such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

Measure WV-27. Before entering or leaving the construction site, all construction equipment shall be inspected for evidence of invasive species and/or their seeds. Should any plants and/or seeds be detected, the equipment will be washed to ensure no invasive species and/or their seeds will be brought into or removed from the site.

Measure WV-28. Prior to construction, substantial populations of invasive plant species identified on the State of California List of Noxious Weed Species and the California Exotic Pest Plant Council Exotic Pest Plants (CalEPPC) of Greatest Ecological Concern in California List adjacent to the grading limits shall be mapped.

Measure WV-29. The Project Biologist shall prepare an invasive species management program to be incorporated into the BRMP. The program shall discuss the invasive species within landscaping and mitigation areas to be eradicated or controlled and eradication methods, which may include mowing, hand removal, or herbicide application. Removal of invasive plant species on the State of California List of Noxious Weed Species with Pest Rating A shall be required, at the direction of the Project Biologist. Eradication, containment, or control of all invasive plant species on the State of California List of Noxious Weed Species with Pest Rating B shall be at the discretion of the Project Biologist. The program shall also address invasive species identified in the California Exotic Pest Plant Council Exotic Pest Plants of Greatest Ecological Concern in California List and methods for their control. The potential for contribution of funds to such programs as the Arundo Removal Program to assist with removal of giant reed or other species from riparian habitats such as San Juan Creek shall also be addressed. The program shall also discuss monitoring of the landscaped and mitigation areas to ensure invasive species are properly controlled or eradicated. The maintenance of the mitigation sites along the corridor will be under the supervision of the Project Biologist (Executive Order 13112, Feb. 3, 1999).

The project EIS also includes a specific mitigation measure related to fish and aquatic species:

Measure TE-9. During final design, the TCA or other implementing agencies, as described in the [Runoff Management Plan], shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to

> *upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.*

While this measure may help ensure that upstream and downstream migration corridors remain open, it does not proposed to address the adverse impacts to tidewater gobies and ESHA described in the above section and therefore would not serve to mitigate the adverse effects to this species anticipated to result from the proposed project.

In addition, as detailed in Section B of this report (Wetlands), to address impacts associated with the proposed permanent placement of elevated "flyway" support structures on 0.16 acres of wetlands, TCA has conceptually proposed to restore and create a one acre area of southern willow woodland adjacent to the proposed water treatment extended detention basin #2 in an area that is currently occupied by an irrigated agricultural field. This woodland area would provide only marginally suitable habitat for the tidewater goby and would therefore not offset the loss of aquatic habitat anticipated to occur as a result of the placement of temporary and permanent structures and equipment within goby occupied ESHA.

In response to the above analysis, *TCA's Response to CCC Report* states:

> *The Staff Report also inaccurately describes the proposed woodland restoration area as providing potential habitat for the tidewater goby. This statement again clearly demonstrates the Coastal Commission Staff's lack of familiarity with the proposed project and its on-site resources.*

As noted above, the Commission agrees with the marginal suitability of the wetland restoration area in term of occupation by tidewater goby. The purpose of referring to this area was to draw attention to the fact that although the proposed wetland mitigation area would be close to and hydrologically connected to the San Mateo Lagoon, use of this area by the tidewater goby would not be expected and it should therefore not be considered as potential mitigation for the anticipated loss of occupied goby habitat.

With regard to wetland areas temporarily affected through construction of the proposed toll road, as described by TCA in the document titled, *Conceptual Habitat Mitigation and Monitoring Plan for Impacts to Areas within the Jurisdiction of the United States Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Game and the California Coastal Commission*, "the applicant will re-contour and re-vegetate all temporarily impacted areas at a 1:1 ratio to replace pre-construction aquatic function." This measure may reduce long-term effects associated with the loss of habitat due to construction activities but would require a substantial amount of time to be realized and may result in directly adverse effects during implementation.

Conclusion
Despite the mitigation measures included above, the Commission finds that the permanent removal of 0.16 acre of designated critical habitat for the tidewater goby as well as the long-term disturbance of between 24 and 29 additional acres through the placement and use of staging areas within tidewater goby critical habitat and proposed construction activities would likely result in an adverse impact to this species. In addition, the anticipated project related increases in several of the factors identified in the scientific literature and December 2005 *Recovery Plan for the Tidewater Goby* as representing primary threats to the survival of the tidewater goby, namely sedimentation, stream alteration and vehicle related pollution, would further increase the likelihood of adverse impacts to the tidewater goby resulting from the proposed project. Although the proposed mitigation measures may result in reduced impacts to this species, the lack of detail regarding the specific provisions of the Biological Resources Management Plan and the uncertainty regarding the extent and adequacy of the project biologist's recommendations and whether or not these recommendations will be fully implemented, do not guarantee that all potential adverse affects to the tidewater goby and its critical habitat areas will be avoided. Overall, the proposed use of at least 17.5 acres of tidewater goby critical habitat that has been designated as ESHA by the Commission ecologist would be inconsistent with the resource protection requirements detailed in Section 30240 of the Coastal Act, both because it is not a resource dependent use (or an allowable use of wetland fill as discussed in the following section of this report), and because it does not protect the tidewater goby from significant disruption of its habitat.

TCA's Response to CCC Report (pages 21-22) takes issue with this conclusion and states:

> *Finally, Coastal Commission Staff's conclusion that the area "within tidewater goby critical habitat and [the] proposed construction activities would likely result in an adverse impact to this species" (p.39) is contrary to the expert agency's opinion. After reviewing the current status of the tidewater goby, the environmental baseline for the action area, the direct and indirect effects of the proposed action, and the cumulative effects, it is the USFWS's preliminary opinion that construction, operation, and maintenance of the toll road is not likely to jeopardize the continued existence of the goby, nor is it likely to destroy or adversely modify its designated critical habitat. This preliminary opinion is supported by the following project facts:*
>
> *(a) Very small direct impacts to tidewater goby are limited to bridge construction activities at San Mateo and San Onofre Creeks; construction may require temporary dewatering of small areas of these creeks, and the dewatering will likely occur outside the spawning season for goby to avoid and minimize impacts to goby reproduction;*
>
> *(b) Gobies in the area of the potential dewatering activities will be captured by seining and released away from the construction footprint;*

(c) *Gobies are expected to remain in the creeks during and following construction and no appreciable reduction in the number of animals or distribution of the species is expected; and*
(d) *Gobies are most plentiful in the lagoons, which are over 700 feet from the impact area. These off-site lagoons are sufficient to support existing goby populations and to provide the necessary conservation function for this species.*

Throughout *TCA's Response to CCC Report*, TCA repeatedly criticizes Commission staff for diverging from the opinions included within a two and a half page letter submitted to the Federal Highway Administration by USFWS in September of 2005. Several pertinent facts should be considered when assessing the validity of TCA's claims regarding this letter. Foremost, the letter was released in 2005, well before the release of the final EIS/SEIR and well before the completion of TCAs alterations and amendments to the proposed project, which by their own admission occurred through 2005 and included the development of a new "preferred alternative" that differed from the A7C-FEC-M Initial Alignment referred to and analyzed in the USFWS letter.

In addition, the letter from USFWS repeatedly qualifies the statements included therein as cursory, subject to further revision and provided at such an early stage only at the specific request of the FHWA. For example, the second paragraph begins: "Based on our draft analyses, we have determined in our preliminary conclusions that the construction and maintenance of the SOCTIIP A7C-FEC-M Initial Alignment (the "proposed action") will not jeopardize the continued existence of the Riverside fairy shrimp, San Diego fairy shrimp, tidewater goby, southwestern willow flycatcher, least Bell's vireo, or thread-leaved brodiaea." The USFWS letter provides no further discussion of these species, the rationale behind this preliminary determination, the information that was considered in their "draft analysis," or the anticipated and potential impacts that were considered and analyzed to formulate this determination.

The Commission's Coastal Act consistency analysis is based on broader habitat questions than simply "jeopardy to continued existence" and has therefore relied more substantially and more appropriately on the wealth of finalized, peer reviewed and publicly vetted studies, research reports and articles that have been made available as a result of the diligent work of biologists funded through academic institutions, research organizations, USFWS, USGS, CDFG, NOAA/NMFS and U.S. Marine Corps Base Camp Pendleton.

Notably, the USFWS letter also includes a reference to the other sensitive species located within the project area that TCA has less frequently drawn attention to. The third paragraph begins: "Our draft analyses for the arroyo toad, coastal California gnatcatcher and its designated and proposed critical habitats, and PPM [Pacific pocket mouse] identify significant project-related impacts to individuals, populations and habitat for these species." Although, as above, Commission staff has not relied solely on these draft findings and notes that supporting documentation or analysis was not provided to

corroborate them, it should be noted that the USFWS preliminary opinion in 2005 recognized "significant project-related impacts" to federally listed sensitive species.

Regarding the project facts noted by TCA in the excerpt from *TCA's Response to CCC Report* included above, far from lending support to TCA's previous assertions that tidewater gobies will not be found within the disturbance area and will therefore not be affected by the proposed project, these facts suggest that gobies do indeed inhabit the area to be used for construction activities. Furthermore, the measures proposed to be taken to ensure that these fish are not adversely impacted, if instituted as proposed, appear likely to result in the disturbance and mortality of at least some tidewater gobies. Dewatering portions of the creek to allow the placement of construction equipment and bridge supports would result in substantial alteration of the creek bed as well as displacing those fish within the dewatered area. The status and suitability of the habitat once water is allowed to return is questionable and is unlikely to represent the same quality habitat that was present before the dewatering occurred.

Arroyo Toad

The arroyo toad (*Bufo californicus*) is a small dark spotted amphibian that is known from 22 river basins in the coastal and desert areas of nine counties along the central and southern coast of California and northwestern Baja California. The arroyo toad is endemic to the coastal plain and mountains of southern California and northwestern Baja California and inhabits intermittent or perennial streams, small streams, riparian areas and upland oak woodland, coastal sage scrub, chaparral and grassland areas within close proximity[10] of riparian zones. As stated by FWS in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad*,

> *The riparian/wash habitats as well as adjacent upland habitats are essential for this species' survival. Periodic flooding that modifies stream channels, redistributes channel sediments and alters pool location and form, coupled with upper terrace stabilization by vegetation, is required to keep a stream segment suitable for all life stages of the arroyo toad.*

Because arroyo toad habitats are favored sites for water storage reservoirs, flood control structures, roads, agriculture, urbanization, and recreational facilities such as campgrounds and off-highway vehicle parks, many arroyo toad populations were reduced in size or extirpated due to extensive habitat loss from 1920 to 1980. The loss of habitat, coupled with habitat modifications due to the manipulation of water levels in many central and southern California streams and rivers, as well as predation from introduced aquatic species, caused arroyo toads to disappear from about 75 percent of their previously occupied habitat in California and prompted the inclusion of this species on the federal endangered species list in 1994.

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[10] Although arroyo toads have been found up to 1.2 miles from the nearest stream, typically they area within about 1100 feet of a watercourse.

Within the project area, the lower reaches of both the San Mateo Creek and San Onofre Creek, as well as nearby uplands, provide important habitat for the arroyo toad. Both of these riparian areas were identified in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, as areas necessary to achieve arroyo toad recovery. Specifically, the recovery plan describes that:

> *The lower portions of the San Mateo Creek basin and the following two basins, San Onofre Creek and Santa Margarita River, which are located on Camp Pendleton, may be the only remaining coastal plain lands in southern California on which the arroyo toad occurs within 10 kilometers (6 miles) of the coastline and down to the coastal marsh zone. As such, they may harbor populations with phenotypic characteristics that are now limited in representation throughout the range of the arroyo toad in California. The lack of agricultural and urban development on these lands probably has allowed these populations to persist.*

Furthermore, as FWS goes on to note in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad*, the San Mateo Creek drainage basin was selected as critical habitat because:

> *San Mateo and Christianitos creeks support large core populations (Holland and Goodman 1998) and are essential to conservation of the species. An unusual and potentially important aspect of this unit is its close proximity to the coast. Historically, there were probably many near-coast populations, but few remain due to extensive urbanization and river channelization. Distinctive climatic conditions near the coast may provide different selective pressures on toads in this area, potentially favoring specific genetic characteristics.*

Additionally, this area was found to satisfy one or more of the following characteristics essential for a designation as critical habitat:

> (*1) supports a substantial core population of arroyo toads; (2) supports at least a small toad population and possesses favorable habitat conditions for population expansion and persistence; (3) suitable habitat situated in a location that appears to be crucial for maintaining the viability of a larger metapopulation; (4) occupied habitat on the periphery of the arroyo toad's geographic range; and (5) occupied habitat in atypical or underrepresented ecological environments (e.g., high elevation or desert-edge populations).*

In April of 2005, due in part to a legal challenge of the original 2001 *Final Designation of Critical Habitat for the Arroyo Toad* brought against the U.S. Fish and Wildlife

Service by TCA,[11] FWS released a revised, *Final Designation of Critical Habitat for the Arroyo Toad* that excluded all habitat areas within the project footprint, including the San Mateo Creek and San Onofre Creek drainage basins. Despite the exclusion of these previously designated critical habitat areas from the revised critical habitat designation document, FWS again underscored the importance of these areas to the survival of the species. The April 2005 *Final Designation of Critical Habitat for the Arroyo Toad* refers to the San Mateo Creek and San Onofre Creek basins as "Unit 11" and states that:

> *Unit 11 contains an indispensable arroyo toad population in the San Mateo Creek and San Onofre Creek Basins. Unit 11 contains several primary constituent elements of low-gradient stream segments with sandy or fine gravel substrates, shallow pools for breeding and rearing of tadpoles and juveniles, and riparian and adjacent uplands habitats for foraging and dispersal to other populations. With so many favorable habitat conditions, this area is able to support a considerable arroyo toad population (Holland and Goodman 1998; CNDDB 2005) and is essential for the species. …Lands within this unit are threatened by cumulative impacts from human activities, including direct mortality from vehicle collisions and vehicular crossings of stream beds, recreational activities, camping, fire, exotic predators, and invasive plants (Holland and Goodman 1998) and require special management to reduce impacts associated with these threats.*

Although focused surveys for arroyo toads have not been conducted by TCA since the late 1990s, the most recent presence/absence surveys TCA conducted in and around San Mateo Creek (from 1996 to 1998) suggest that arroyo toads continue to inhabit the riparian and nearby upland areas surrounding this creek basin. Additionally, in the arroyo toad population census conducted by Dan Holland et al. in 2001, one of the largest populations of toads within MCB Camp Pendleton was found to exist in the lower portion of San Mateo Creek. These results are referenced by TCA in the project EIS. Specifically, the EIS states that:

> *During surveys conducted between 1996 and 2001,* [arroyo toad] *were found to occur in areas associated with all [toll road] alignments that would cross San Juan Creek, and Gabino Creek or parallel San Mateo and Cristianitos Creeks. On MCB Camp Pendleton, San Onofre Creek is known to support* [arroyo toad], *and it is likely that suitable habitat within this drainage occurs in the* [study area].

Similarly, the refined TCA document titled *Focused Summary of Environmental Impacts in the Coastal* Zone states that "there is potential for [arroyo toad] to be affected during construction of the bridge structures over San Mateo and San Mateo Creeks and associated upland aestivation areas…". Furthermore, the March 2007 MCB Camp

[11] This lawsuit was based entirely on arguments regarding the economic analysis conducted by FWS in the critical habitat designation document and did not refute the existence of arroyo toads within San Mateo and San Onofre Creeks or the importance of these areas to the conservation of the species.

Pendleton *Integrated Natural Resources Management Plan* further establishes the importance of San Mateo and San Onofre Creeks to the arroyo toad:

> *It is likely that some of the largest remaining populations of [arroyo toad] occurs on Camp Pendleton. Additionally, the lower portions of the San Mateo Creek Basin, the San Onofre Creek, and Santa Margarita, all of which are located on Camp Pendleton, may be the only remaining coastal plain lands in southern California on which the arroyo toad occurs within 10 kilometers (6 miles) of the coastline and down to the coastal marsh zone. As such, they may harbor populations with phenotypic characteristics that are now limited in representation throughout the range of the arroyo toad in California… In 2003, a spatial and temporal monitoring approach…that tracks the presence of arroyo toad breeding populations by documenting the presence of eggs and larvae was implemented. In 2003, 78% of potential toad breeding habitat contained water during survey efforts. Of these areas, 87.4% (se = 9.5) of the habitat was occupied by breeding arroyo toads. The greatest occupancy was recorded on the San Mateo watershed (97.9%), followed by the San Onofre (90.9%) and Santa Margarita (83.8%) watersheds.* [emphasis added]

Due to the recorded occupancy and use of riparian and upland habitat areas within the coastal zone portion of the project area, the well established importance of these areas for local and global populations of arroyo toads, and their recognized susceptibility to disturbance, the Commission ecologist has determined that those areas within the coastal zone portion of the project area that were designated as critical habitat by FWS in 2001, meet the Coastal Act definition of ESHA. As demonstrated in Exhibits 15 and 16, due to the affinity of this species for riparian and adjacent upland habitat and its recorded location among these habitats within the project area, areas designated as ESHA for the arroyo toad have also been identified as wetlands and/or critical habitat/ESHA for the tidewater goby, least Bell's vireo and coastal California gnatcatcher (as discussed in the analysis for those species in this section). Wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

TCA's Response to CCC Report (page 22) disputes the analysis and information provided above by stating:

> *Extensive surveys for arroyo toad did not identify any toads within the coastal zone portion of the project (1987 through 2001, EIS/SEIR Section 4.12.2.1).*

The Commission disagrees. Section 4.12.2.2 of the project EIS/SEIR – Threatened and Endangered Wildlife Species (TCA's reference to Section 4.12.2.1 is in error as this section refers to Threatened and Endangered Plant Species) states that: "USFWS-protocol surveys were conducted in 2001 in known occupied AT [arroyo toad] habitat, including… Cristianitos Creek and San Mateo Creek in the study area. Six surveys were performed on each reach of known occupied streams, unless that segment became

seasonally dry… Locations of AT observations were mapped on color aerial photographic maps (Figure 4.11-3e)." A review of the relevant figure immediately reveals that four separate arroyo toads were observed within the coastal zone portion of the project area, all of which were within or immediately adjacent to the proposed project's disturbance footprint. Figure 4.11-3e from the project EIS/SEIR is available on TCA's website at: http://www.thetollroads.com/home/Section%204/4.11%20Figures/Figure%204.11-3e%2010.pdf

In addition, the reference to surveys conducted within the coastal zone from 1987 through 2001 is similarly inaccurate. As stated above, the only arroyo toad survey conducted within the coastal zone was started and completed in 2001. Therefore, in direct contradiction of TCA's claim that five years of surveys did not reveal a single arroyo toad within the coastal zone portion of the project, the EIS/SEIR reveals that only six surveys conducted over a single year clearly demonstrated the presence of arroyo toads within the project footprint.

Furthermore, in support of the information provided in the EIS/SEIR a recent letter dated January 22, 2008, from Robert Lovich, a noted biologist with nearly a decade of direct experience with the management, research and conservation of arroyo toads, reiterates:

> *Page 8 of the executive summary of TCA's response states that the arroyo toad was not identified by surveys "within the coastal zone portion of the project." However, even if these particular surveys did not find the arroyo toad [although they actually did], the fact remains that they do occur within the footprint of the project within the coastal zone. Overwhelming evidence for this exists in the collections, peer reviewed literature, contract reports, and my own personal observations (Holland and Goodman 1998, Shanahan 1998, Atkinson et al. 2003, Brehme et al 2006, pers. Obs.). Precise locations in reports plus the mobile nature of the species guarantees occupation and utilization of the project footprint by arroyo toads. TCA ignores the best available scientific information amassed over decades of work on the arroyo toad in San Mateo Creek.*

Potential Effects on ESHA and Arroyo Toads

Proposed project activities within this area have the potential to adversely affect the arroyo toad population in a variety of ways. The proposed use of nearly 40 acres[12] of previously designated arroyo toad critical habitat in and around San Mateo Creek for equipment and materials storage and staging, construction and use of access roads, scaffolding, elevated support structures, retaining walls, and other construction related activities for approximately three years would result in the loss of upland and riparian habitat, increased sedimentation and habitat alteration, and would increase the potential

[12] Although the project EIS does not include a calculation of previously designated arroyo toad critical habitat within the proposed project's disturbance limits, staff of the Commission's Technical Services Mapping Unit have calculated the area of previously designated arroyo toad critical habitat within the disturbance limits to be 39.33 acres, as demonstrated in the revised Exhibit 15.

for direct mortality to toads due to interactions with construction vehicles and equipment and sediment and water contamination due to the release of construction related fluids and materials.

TCA refutes this analysis on page 9 of TCA's Reponse to CCC Report by stating that:

> *The Coastal Commission staff grossly overestimates the potential arroyo toad habitat to be impacted by the proposed project. Staff's calculations of 66 acres (p.43) includes approximately 32 acres of habitat types that cannot or do not support the arroyo toad such as existing transportation facilities (I-5 and other paved roadway surface) and other developed/disturbed areas containing non-native and ornamental vegetation (landscaped areas).*

A subsequent re-examination of the amount and location of previously designated arroyo toad critical habitat within the proposed project's disturbance limits (for which Commission staff's calculation of ESHA acreage was based) has revealed that USFWS did indeed include developed areas such as I-5 as critical habitat. In light of this recent finding, Commission staff has re-calculated the amount of arroyo toad ESHA within the proposed project's disturbance limits as approximately 40 acres. This revised figure does not include developed areas such as I-5.

As stated in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*:

> *Human activities that affect water quality, influence the amount and timing of nonflood flows or frequency and intensity of floods, affect riparian plant communities, or alter sedimentation dynamics can reduce or eliminate the suitability of stream channels for arroyo toad breeding habitat. Degradation or loss of surrounding uplands reduces and eliminates foraging and overwintering habitat. The effects of such activities may not become apparent until many years later when the habitat finally becomes sufficiently degraded that arroyo toads can no longer reproduce and survive. These negative human activities include urbanization and agriculture within and adjacent to riparian habitats, dam building and the resulting reservoirs, water flow manipulations, sand and gravel mining, suction dredge mining, road placement across and within stream terraces. livestock grazing, off-highway vehicle use of roads and stream channels, the placement of campgrounds in arroyo toad habitat (especially on stream terraces), and the use of stream channels and terraces for other recreational activities*.

Many of the activities described above would occur as a result of the proposed project, greatly increasing the likely occurrence of both short- and long-term adverse affects to the arroyo toad. TCA recognizes these potential affects and others in the project EIS and states that:

> *Impacts to* [arroyo toad] *from construction include construction of bridges in drainages where this species is known to occur or has the potential to occur. Bridge construction would result in impacts to sandy bottoms of areas where* [arroyo toad] *is known to breed and burrow. Construction of bridges would also displace adjacent upland habitat and increase the risk of vehicular mortality. Noise from construction activities during breeding season would result in impacts to mating behaviors by masking* [arroyo toad] *calls.* [Arroyo toads] *were identified in the* [proposed toll road's] *disturbance limits.*

In addition to the potential for construction related impacts to the arroyo toad, the placement and operation of the proposed toll road within previously designated arroyo toad critical habitat areas would result in additional threats to the species. In both the project EIS and the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, the placement and existence of roads within occupied habitat are discussed as a potentially serious impediment to the survival of the species:

> *Both paved and unpaved roads can have negative effects on arroyo toads, especially when the roads are on stream terraces close to arroyo toad breeding habitats. Although arroyo toads crossing or foraging on paved roads are subject to high mortality at times, especially on rainy nights, (D. C. Holland, in titt. 1997; W. E. Hans et at., in titt. 1998) the loss of arroyo toads to traffic is particularly apparent on unpaved dirt roads where increased food availability causes toads to congregate at night to feed. Many subadult and adult toads can be killed by even one or a few vehicles… Toads may use roads and trails as dispersal routes, exposing them to traffic risks at significant distances from the breeding habitats (W. B. Hans et at., in titt. 1998). Toads also burrow into sandy roadbeds during the day, when they also may be crushed by vehicular and foot traffic (Nancy Sandburg, Los Padres National Forest, pers. comm. 1997; 5. 5. Sweet, in titt. 1997). Wet season burrows tend to be very shallow and are often in areas accessible to foot or vehicular traffic, as well as livestock (W. E. Hans et at., in titt. 1998).*
>
> *The problems associated with roads are not limited to those near campgrounds. On Camp Pendleton, San Diego County, and Fort Hunter Liggett, Monterey County, roads on stream terraces and stream crossings are utilized by military vehicles, often during maneuvers or training sessions at various times of the day and night, throughout the year. These activities can lead to high mortalities of toads within areas of arroyo toad habitat (D. C. Holland, pers. comm. 1997). Construction of major roads such as the Foothill Transportation Corridor can have significant direct and indirect effects on arroyo toads and their habitat.*

As evidenced by the specific inclusion of the Foothill Transportation Corridor, the proposed toll road, in this document and the 2001 *Final Designation of Critical Habitat for the Arroyo Toad* which states that "The completion of the Foothill Transportation

Corridor could affect toads in the San Mateo basin," the proposed project's potential to adversely affect the arroyo toad has long been recognized and established. It should be noted, however, that the proposed use of the elevated connector structures for the north- and southbound lanes of the toll road may not have been contemplated during the drafting of these documents. The use of these structures will greatly reduce the amount of arroyo toad accessible road surface within the coastal zone portion of arroyo toad occupied habitat during the operational phase of the proposed project and thereby reduce the operational impacts associated with the project. As demonstrated in Exhibit 15 however, a substantial portion of un-elevated roadway would still exist within and adjacent to arroyo toad occupied habitat outside of the coastal zone. In addition, the construction of the elevated roadway will require the use of substantial amounts of equipment and machinery such as pile drivers, material and concrete trucks, graders, and cranes in the riparian and upland areas surrounding San Mateo Creek for as long as three years. The dirt access roads required by these vehicles and their passage through arroyo toad occupied habitat are exactly the types of activities described as posing serious threats to the arroyo toad in the above excerpt for the 1999 recovery plan and would substantially increase the potential for direct mortality to toads within the project's disturbance limits. Furthermore, the proposed project includes the construction and placement of a military access road directly adjacent to San Mateo Creek and through arroyo toad critical habitat. Even after the construction access roads have been abandoned, the existence of this road would continue to pose a threat to the local population of arroyo toad.

An additional potential indirect affect of the elevated roadway on the arroyo toad may also arise from the increase in shading in and around San Mateo Creek and San Onofre Creek that would result from the proposed project. The proposed toll road alignment includes the placement of several hundred feet of elevated structures and bridges around these riparian areas which would substantially alter the availability of sunlight and therefore the temperature of surface waters and abundance of the photosynthetic algae that provides forage for larval toads. This potential issue is addressed by FWS in the 1999 *Recovery Plan for the Southwestern Arroyo Toad* which states that, "Heavily shaded pools are generally unsuitable for larval and juvenile arroyo toads because of lower water and soil temperatures and poor algal mat development (Sweet 1992)." Although little scientific study has been conducted regarding the exact shading levels that would cause pools to become unsuitable for young arroyo toads, increased shading resulting from the proposed project may result in declines in the population of juvenile and larval arroyo toads within the project area.

Beyond the direct effects on the arroyo toad population within the project area, proposed project activities would also substantially alter or degrade large areas of ESHA that provide arroyo toads with habitat and were previously designated as critical habitat. As mentioned previously, the proposed project includes the clearing, grading and use of nearly 40 acres of ESHA for three years during construction to facilitate staging areas, access roads, and construction areas. In addition, proposed project activities would likely degrade additional arroyo toad occupied or potentially occupied ESHA outside of the 40

acres directly within the proposed project's disturbance limits. For example, the proposed use of pile driving equipment would increase sound levels to at least 65 decibels within a radius of 2800 feet around the pile driver. Each pile driving site would therefore result in 565 acres being subjected to elevated sound levels of at least 65 decibels. This sound level has been determined to be of sufficient volume to cause speech interference in humans. To construct the proposed elevated "flyway" structures, TCA has proposed conducting pile driving activities for approximately one year. Although the affects of these proposed noise levels on arroyo toads have never been subjected to scientific scrutiny, if pile driving is conducted during evening or night hours, arroyo toad mating calls may be rendered inaudible, resulting in potentially substantial declines in the reproductive success of any or all arroyo toads within the 565 acre pile driving sound footprint and thereby degrading the quality of habitat within this area.

Overall, as described in an August 2007 letter to Commission staff from Robert Lovich, a recognized expert on the arroyo toad with nearly a decade of direct experience with the management, research, and conservation of the species:

> *This project would significantly disrupt arroyo toad populations in the coastal zone of San Mateo Creek watershed, and over the long term would impact populations in neighboring watersheds and tributaries as well.*
>
> …
>
> *…potentially irreversible fragmentation of arroyo toad populations within and without the coastal zone would result from the construction of the proposed toll road. The toll road footprint represents the last wildlife corridor that extends from the Pacific Ocean inland to the Santa Ana Mountains. Areas to the north and south have already been compromised by development, and arroyo toads vanished from these areas long ago. The toll road in this location would degrade and fragment this extraordinary relict of a once larger functional ecosystem in southern California.*

TCA consultant Dr. Dennis Murphy disputes the analysis included above by stating in *TCA's Response to CCC Report* that:

> *The arroyo toad is widespread in the San Mateo and San Onofre watersheds; with nearly all of its extensive local distribution above the coastal zone, where an extraordinary ninety-plus percent of available habitat was occupied by the arroyo toad as recently as 2003. As is clear from maps at Tabs 15 and 16 in the staff report, the fate of the arroyo toad in the overall project area is very much a matter of its survival in areas inland (and largely well inland) of the coastal zone. And, as with the Pacific pocket mouse, surveys in support of the EIS/SEIR did not find the species in the coastal zone portion of the project area.*

This statement is refuted by the project EIS/SEIR. As stated before, Figure 4.11-3e of the project EIS/SEIR clearly demonstrates arroyo toads within the project disturbance footprint within the coastal zone. Furthermore, although not cited and therefore not verified by Commission staff (although it is assumed that the reference is to the March 2007 MCB Camp Pendleton *Integrated Natural Resources Management Plan* –see relevant quote on page 54 of this staff report), Dr. Murphy's assertion that greater than 90% of available habitat adjacent and contiguous with the coastal zone was occupied by the arroyo toad in 2003 lends further support to the likelihood and importance of suitable arroyo toad habitat within the coastal zone and within the project footprint. Such dense occupation of adjacent habitat areas in 2003 would suggest that had TCA conducted arroyo toad surveys within the coastal zone in 2003 instead of 2001, many more toads may have been observed within the coastal zone.

In addition, Dr. Murphy's assessment is again contradicted by Robert Lovich, who has been studying the arroyo toad within the project area for nearly 10 years. Mr. Lovich has substantial experience with the arroyo toad and asserts in an August 16, 2007, letter to the Commission (Exhibit 8 of the list of exhibits included with the first addendum to the original staff report) that:

> *This project would significantly disrupt arroyo toad populations in the coastal zone of San Mateo Creek watershed, and over the long term would impact populations in neighboring watersheds and tributaries as well.*
>
> …
>
> *…potentially irreversible fragmentation of arroyo toad populations within and without the coastal zone would result from the construction of the proposed toll road. The toll road footprint represents the last wildlife corridor that extends from the Pacific Ocean inland to the Santa Ana Mountains. Areas to the north and south have already been compromised by development, and arroyo toads vanished from these areas long ago. The toll road in this location would degrade and fragment this extraordinary relict of a once larger functional ecosystem in southern California.*

Mitigation

Due to the fact that the project EIS identified a variety of potential and likely adverse affects to arroyo toads as a result of the proposed project, TCA has proposed several mitigation measures to minimize and offset these impacts. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the arroyo toad:

> *Measure TE-9. During final design, the TCA or other implementing agencies, in coordination with as described in the RMP, shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.*

The implementation of this measure may benefit the arroyo toad by ensuring that water is maintained in portions of San Mateo Creek and San Onofre Creek that support the tidewater goby and also provide breeding and spawning areas for the arroyo toad. However, as described in the 1999 arroyo toad recovery plan, arroyo toads require "Periodic flooding that modifies stream channels, redistributes channel sediments and alters pool location and form" and are very sensitive and vulnerable to alteration of stream bed habitat that may change the frequency and extent of these flooding events. If the placement of bridge and elevated toll road support structures within riparian areas and/or the implementation of the provisions of this mitigation measure change the existing hydrology of either creek, arroyo toads within these areas may be adversely affected. TCA has not provided a sufficient level of detail regarding the proposed in-stream construction activities to allow an adequate analysis of the likelihood and magnitude of these potential affects.

> *Measure TE-10. An Arroyo Toad Resource Management Plan (ATRMP) will be prepared and will comply with the requirements of Section 7(a)(2) of the Federal Endangered Species Act. The ATRMP will be incorporated into the BRMP, and action items identified in the plan will be implemented by TCA and monitored by the Project Biologist. The plan shall include measures detailing how the impact area will be surrounded with a silt fence enclosure, and how arroyo toads will be removed and relocated from the construction impact area during the breeding season (when they are detectable by vocalizations) and placed in suitable habitat either upstream or downstream of the selected alternative during construction. The ATRMP will identify areas of collection, suitable areas for temporary housing, and restoration guidelines to be in place prior to release of toads to their original location. The plan shall by submitted to the USFWS to the extent required by such agency. The locations of areas known to support arroyo toads shall be identified in the ATRMP and on the ESA maps to comply with the requirements of the biological opinion.*

The implementation of this mitigation measure also has the potential to minimize adverse construction impacts to the arroyo toad population within the project area. The uncertainty and temporal gaps contained within the mitigation strategy proposed above are sufficient to call into question the ability of this strategy to adequately minimize construction impacts, however. Because the strategy proposed above only commits to

capturing and re-locating toads within construction areas "during the breeding season (when they are detectable by vocalizations)," typically a six-month period from February to July of each year, approximately half of each year would pass without this strategy in place. As TCA describes in a September 7, 2007, document responding to questions and comments from Commission staff, "The total construction duration within the coastal zone will last approximately 3 years to complete. This includes earthwork, utilities, the [northbound] and [southbound] connectors, Basilone Bridge, San Onofre Bridge widening, ramps, Camp Pendleton San Onofre Gate and Green Beach access road and water quality basins." Therefore, construction operations are proposed to occur for approximately 18 months without an active capture/relocation program in place to protect those arroyo toad individuals that may inhabit the construction zone. Furthermore, the mitigation strategy detailed above depends heavily on the requirements and provisions of the Endangered Species Act Section 7 consultation conducted by FWS. Because this consultation has yet to be completed and publicly released, an analysis of the adequacy and completeness of provisions and requirements that may be included within this document is not possible.

> *Measure TE-11. Prior to initiating any ground-disturbing activities in occupied/suitable habitats, or habitats proximal to suitable or occupied habitats for arroyo toad, exclusionary fencing shall be installed around the perimeter of the construction area. Fencing or screening approximately 60 cm (two ft) in height (30 cm [one ft] of which will be buried below the surface) shall be installed to prevent arroyo toads from entering the area after the onset of construction. The fencing will be installed at least 14 days prior to the initiation of work and must be made of a material appropriate to preclude any arroyo toads from entering the construction area. Fencing will be removed each winter during construction and at the end of project construction. Vehicle use will be restricted within areas known to support populations of the arroyo toad that are shown on the ESA maps.*

Again, this measure has the potential to reduce the number and likelihood of adverse affects to the arroyo toad from construction related activities. As with the previous mitigation measures, however, this measure does not include a sufficient level of detail to adequately assess its potential for success. While exclusionary fencing may provide a barrier to the movement of toads, TCA has yet to develop and release the "ESA maps" referenced above and it is therefore not possible to determine whether or not this measure would be implemented within all areas identified in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, and the 2001 and 2005 *Final Designation of Critical Habitat for the Arroyo Toad,* as suitable, essential and critical habitat for the arroyo toad.

> *Measure TE-12. a. The Project Biologist shall conduct three focused arroyo toad surveys within the fenced construction site for arroyo toads a minimum of 14 nights prior to initiating project construction. If climatic conditions are not appropriate for arroyo toad movement during the surveys, the Project Biologist may attempt to illicit a response from the arroyo toads, during nights with*

> *temperatures of 13ºC (55ºF) or greater, by spraying the project area with water to simulate a rain event. During construction, arroyo toads surveys will be performed a minimum of once per week and on all nights where the combination of rain/humidity and temperature would increase the movement of arroyo toads.*
> *b. If arroyo toads are found with the construction side of the exclusionary fencing, arroyo toads will be removed by the Project Biologist and relocated from the construction impact area and placed in suitable habitat either upstream or downstream of the construction area as outlined in the Arroyo Toad Resource Management Plan.*

The likelihood of arroyo toads to respond to "simulated rain events" has not been adequately established in the scientific literature and it is therefore uncertain what percentage of the total arroyo toad population within the fenced construction areas would be captured through the use of this technique. Accordingly, it would be possible for arroyo toads to become trapped in the enclosed construction areas during construction and disturbance activities and suffer mortality. In addition, the proposed Arroyo Toad Resource Management Plan referenced above has yet to be developed or provided to Commission staff for review. An assessment of the adequacy of habitat areas proposed to be used for relocated arroyo toads is therefore not possible.

Furthermore, while this strategy may be successful in removing toads from the construction area, due to the fact that adjacent habitat within the San Mateo Creek and San Onofre Creek watersheds is so densely occupied, as demonstrated in the March 2007 MCB Camp Pendleton *Integrated Natural Resources Management Plan*, from 91% to 98% of available breeding habitat was occupied by arroyo toads in these watersheds in 2003 surveys, it is likely that the displacement of arroyo toads from the 50 acres of arroyo toad occupied ESHA within the project footprint would substantially increase resource competition in adjoining areas that may already be spatially constrained. The relocation of toads into areas already heavily used and occupied by other toads may result in adverse impacts to both populations.

> *Measure TE-13. The Contractor shall locate staging areas for construction equipment outside of areas within the jurisdiction of the USACOE or CDFG known to support arroyo toad to minimize impacts to sandy creek benches that may provide aestivating habitat for the arroyo toad to avoid taking any individuals.*

Despite this proposed mitigation measure, as demonstrated in Exhibit 17, one of the principal proposed staging areas for construction activity within the coastal zone portion of the project area would be located within an area that was designated as critical habitat for the arroyo toad in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad* and was recognized as essential and occupied habitat in both the 2005 *Final Designation of Critical Habitat for the Arroyo Toad* and the 1999 *Recovery Plan for the Southwestern Arroyo Toad*. This area encompasses roughly a dozen acres of occupied upland habitat,

and although it may technically be located "outside of areas within the jurisdiction of the USACOE or CDFG known to support arroyo toad" it should be noted that the USACOE jurisdiction is limited to riparian or wetland areas and does not include the upland habitats that are essential to the survival of the arroyo toad and CDFG jurisdiction is limited within federal lands. This mitigation strategy will not provide a sufficient level of protection for the arroyo toad and, furthermore, TCA's proposed placement of a primary staging area within essential and well recognized arroyo toad habitat represents a significant threat to the species.

> *Measure TE-14. When conducting construction and/or other ground-disturbing activities in arroyo toad occupied habitats or in adjacent upland areas proximal to known arroyo toad habitats, the Contractor shall cover all grubbing spoils or other grading debris with plastic sheeting to prevent arroyo toads from opportunistically burrowing in these exposed and friable soil piles. This sheeting must be placed on the soil piles before sunset and shall remain on (during nighttime hours) for the duration of the construction/ground disturbing activities. The areas where these measures must be implemented shall be determined by the Project Biologist in coordination with the USFWS. If the sheeting does not remain in place due to unforeseen circumstances, (inclement weather or other disturbances) a biologist will monitor the soil piles for the arroyo toad. Any arroyo toads found within the soil piles will be removed and relocated as outlined in the Arroyo Toad Resource Management Plan.*

Similar to other measures included above, this proposal has the potential to minimize potential adverse impacts to the arroyo toad. However, the placement of "grubbing spoils"[13] and other grading debris within occupied arroyo toad habitat and the subsequent covering of these debris piles with plastic sheeting would impinge on those potentially important upland foraging habitats and movement corridors occupied by these debris piles. Although specific size and area figures have not been provided by TCA for these debris piles, based on the proposed grading and fill of several million cubic yards of soil, these debris piles could encompass a substantial portion of arroyo toad habitat and result in increased spatial, breeding and forage resource competition among the remaining habitat areas.

> *Measure TE-15. The Contractor shall not drive upon construction roads or other roads/surfaces adjacent to arroyo toad occupied habitat after sunset. If the site must be accessed, a biologist permitted to handle arroyo toad must be present in the vehicle to identify any individuals on the road and the vehicle shall not exceed a speed of 16 km per hour (10 mi per hour) within these areas.*

As described above, the use of vehicles in occupied arroyo toad habitat has been identified as one of the primary threats to the continued existence of this species.

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[13] "Grubbing" typically refers to the process of removing all vegetation, roots and/or stumps from an area.

Although the implementation of this mitigation measure would likely reduce the number of arroyo toad mortalities that would occur after sunset, daytime vehicle use in arroyo toad occupied habitat areas would still occur and would have the potential to adversely affect the species through direct mortalities.

> *Measure TE-16. Prior to construction, the Project Biologist shall document the area of pools and gravel bars within the temporary disturbance areas of creeks occupied by the Arroyo Toad. At the conclusion of construction, the TCA or other implementing agencies shall construct artificial pools and gravel bars within these temporary disturbance areas of creeks that are known to be occupied by arroyo toad. The artificial pools and gravel bars shall provide potential breeding and aestivating habitat for arroyo toad. These areas will be identified and established by the Project Biologist in the BRMP. The artificial pools and gravel bars shall be equal to or greater in size than those areas impacted by project implementation. Because of the natural flooding and scouring conditions of the creeks within the study area, no maintenance of these areas will be required. The construction of these features shall not preclude required Caltrans bridge maintenance. Plans shall be submitted to USFWS for review and approval, to the extent required by such agency, prior to implementation.*

As discussed previously, there is some scientific evidence that suggests that shaded pools may provide unsuitable or marginal habitat for larval and juvenile arroyo toads. It should be noted, therefore, that the majority of those arroyo toad occupied creek areas that would be within the disturbance limits of the proposed project, and would be used to locate the artificial pools and gravel bars, would also be within areas that would experience some increased level of shading due to the presence of the expanded I-5 bridge structures over San Mateo and San Onofre Creeks and/or the elevated toll road "flyway" structures. These artificial pools and gravel bars may therefore not provide habitat for arroyo toads that would be similar to the habitat that was removed or disturbed during construction activity within arroyo toad occupied stream beds and therefore may not provide a net benefit to the species.

> *Measure TE-17. Prior to the arroyo toads' re-establishment to their original locations, specific activities to enhance their habitat and improve their potential for re-occupation will be implemented. These measures include the removal (up to 15 days in advance of the re-establishment), to the extent practicable, of predatory species such as bullfrogs, western mosquito fish, yellow bullheads, bluegill, and additional predatory invertebrates, amphibians, and introduced fish species. Plans shall be submitted to USFWS for review and approval prior to implementation to determine compliance with the biological opinion.*

This measure, if implemented in such a way as to not adversely affect existing populations of arroyo toads and tidewater gobies, has the potential to substantially benefit arroyo toads. Introduced predators have been identified as representing a substantial

threat to arroyo toads and the removal of these species would likely reduce the level of predation currently experienced by the toad. However, any process that involves selectively eliminating pest species within an area that is simultaneously occupied by sensitive and endangered species may be difficult and complicated to implement successfully. Accordingly, this measure would need to be carefully designed and developed so as to not inadvertently affect non-target species such as arroyo toads and tidewater gobies. Because the specific details of this proposal have not been established or developed it is not possible to determine if the implementation of this measure would result in a net benefit to the species.

In addition to the mitigation measures described and analyzed above, *TCA's Response to CCC Report* (page 24) includes a reference to the use of wildlife undercrossings by the arroyo toad:

> *In coordination with USFWS, large diameter culverts have been incorporated into the project design under the road to provide for wildlife movement to upland areas west of the alignment. In addition, TCA has committed to installing a permanent mesh fence at the base of the chain-link fence along the roadway in areas near toad habitat. The fencing will act as a barrier, keeping toads off the road, and as a drift fence to funnel toads to culverts that cross under the road.*

TCA has provided no evidence to suggest that this strategy will be successful. Careful review of the wildlife undercrossing annual monitoring reports from the previous SR-241 toll road project from 1999-2003 demonstrate that wildlife undercrossings are only marginally successful in providing movement corridors for larger wildlife such as deer, coyote, bobcats and skunks, despite the fact that attractants were often present near the entrance to the undercrossings. The Commission is unaware of research demonstrating that small, less mobile animals such as toads would use the large culverts that TCA is suggesting or would be "funneled" to these culverts by exclusionary fencing.

Conclusion

As detailed above, the proposed project has the potential to adversely affect the arroyo toad population within the coastal zone portion of the project area in a variety of ways. Adverse impacts to this species are recognized and anticipated by TCA and numerous mitigation measures have been developed to minimize and offset these impacts. As the above discussion makes clear however, these mitigation strategies have either not been developed in sufficient detail to permit an adequate analysis of their potential for success, or questions remain as to their ability to provide a net benefit to the species. Therefore, the Commission finds that apart from proposing a use of nearly 50 acres of ESHA that is fundamentally inconsistent with Section 30240 of the Coastal Act, the proposed project also has a strong potential to result in substantial adverse impacts to one of the few and remaining coastal populations of the endangered arroyo toad. The Commission therefore finds the proposed use of arroyo toad occupied ESHA to be inconsistent with the resource protection policies stipulated in Section 30240 of the Coastal Act, both because it is not a

resource dependent use, and because it does not protect the arroyo toad from significant disruption of its habitat.

TCA's Response to CCC Report (page 22) refutes the analysis provided above regarding the coastal population of arroyo toads within the project area by stating:

> *Without any scientific justification, Coastal Commission staff has fabricated a "coastal population" of arroyo toads upon which it has concluded that the project would have "substantial adverse impacts" (p.52). There is absolutely no scientific data supporting the claim that the arroyo toads closer to the coast are genetically any different from the abundant toads further inland.*

The Commission disagrees. Regarding scientific justification for the idea of a genetically distinct coastal population of the arroyo toad, several studies have tested and reinforced this theory including research conducted by J.A. Shanahan in 1998 and cited by Robert Lovich in his August 16, 2007 letter to the Commission (Exhibit 8 of the list of exhibits included with the first addendum to the original staff report) which notes that:

Shanahan *(1998) studied the population genetics of the arroyo toad using micro-satellites and found evidence of recent gene flow between populations in San Onofre Creek and San Mateo Creek watersheds. Variation was found among populations within San Mateo Creek tributaries as well. This data, and that from my PhD. Dissertation* [regarding the mitochondrial DNA sequence variation within the arroyo toad] *support the model that gene flow is occurring in geographically proximal streams such as San Mateo River and San Juan Creek. Such gene flow is well known to maintain genetic diversity and avoid deleterious effects from inbreeding.*

This idea is further reinforced by Robert Lovich in his recent January 18, 2008, letter to the Commission (Exhibit 8 of the list of exhibits included with the first addendum to the original staff report) which clarifies that:

> *Section iv of TCA's response claims that "There is absolutely no scientific evidence that arroyo toads closer to the coast are any different from those inland." This is a false statement. The M.S. Thesis by Shanahan (1998) that I cited in my letter, conclusively proves otherwise. Arroyo toads are significantly different genetically in coastal portions of San Mateo and San Onofre Creek than populations farther inland or in other watersheds.*

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*), a small, long tailed bird with dark blue-gray plumage on its dorsal side and gray-white plumage on its underside, feeds primarily on insects and is one of three subspecies of the California gnatcatcher. The coastal California gnatcatcher (hereafter referred to as gnatcatcher) is restricted to coastal areas in southern California and northwestern Baja California.

Within these areas the gnatcatcher occurs primarily in the coastal sage scrub community – a distinctive vegetation type composed of relatively low-growing, summer deciduous and succulent plants such as coastal sagebrush, sage, lemonadeberry, California encelia, prickly pear and cholla cactus – but is also known to use habitat in other vegetation communities including Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. The gnatcatcher is a non-migratory species that exhibits high site fidelity, strongly defends breeding territories (ranging in size from 2 to 14 acres) between late February and early August, and occupies home ranges of between 13 and 39 acres.

Although considered locally common in the mid-1940s, by the 1960s the gnatcatcher had experienced a significant population decline in the U.S. that has been attributed to widespread habitat destruction and declining reproductive success due to nest parasitism by the brown-headed cowbird.[14] As described by researchers Pyle and Small in 1961, "the California subspecies is very rare and lack of recent records of this race compared with older records may indicate a drastic reduction in population." Studies conducted by Dr. Jonathan Atwood of the Manomet Bird Observatory in 1980 estimated that no more than 1,000 to 1,500 pairs of gnatcatcher remained in the United States and that remnant portions of its habitat were highly fragmented with nearly all being bordered on at least one side by rapidly expanding urban centers. The coastal sage scrub habitat preferred by the gnatcatcher has declined some 90% from historical levels and is among one of the most depleted and threatened habitat types in North America. Accordingly, the species was listed as threatened under the Endangered Species Act in March 1993, due to habitat loss and fragmentation resulting from urban and agricultural development, and the combined effects of cowbird parasitism and predation.

As required under the Endangered Species Act, the U.S. Fish and Wildlife Service designated critical habitat for the gnatcatcher in 2000. The *Final Determination of Critical Habitat for the Coastal California Gnatcatcher*, released in October of 2000, was based on a comprehensive compilation of the most up to date academic and commercial knowledge of the range, distribution and habitat requirements of the gnatcatcher and relied on site specific surveys, habitat evaluation models, gnatcatcher occurrence data and reserve design criteria that established both core gnatcatcher populations, as well as linkage areas essential for the conservation of the species. As stated by FWS in the final critical habitat determination:

> *All areas designated as critical habitat for the gnatcatcher contain one or more of these physical or biological features, also called primary constituent elements. The primary constituent elements for the gnatcatcher are those habitat components that are essential for the primary biological needs of foraging,*

[14] Cowbirds do not build their own nests but instead lay their eggs in the nests of other species, usually to the detriment of the host birds' own eggs or young. Cowbirds have expanded tremendously in both range and numbers since 1900 as irrigated agriculture and animal husbandry increased.

> *nesting, rearing of young, intra-specific communication, roosting, dispersal, genetic exchange, or sheltering (Atwood 1990). Primary constituent elements can be provided in undeveloped areas that support various types of sage scrub or chaparral, grassland, and riparian habitats where they occur in an essential core population or linkage area proximal to sage scrub and where they may be utilized for biological needs such as breeding and foraging (Atwood et al. 1998, Campbell et al. 1998). Primary constituent elements associated with the biological needs of dispersal are also found in undeveloped areas that provide connectivity or linkage between or within larger core areas, including open space and disturbed areas containing introduced plant species that may receive only periodic use.*

FWS also specifically notes in the 2000 critical habitat designation that the undeveloped open space and scrub habitat located within portions of the project area has been identified as important habitat for the gnatcatcher:

> *Marine Corps Base Camp Pendleton represents one of the largest contiguous blocks of coastal sage scrub in southern California. The base provides habitat for numerous core populations of gnatcatchers and essential habitat linkages between core populations in northern San Diego County to those in southern Orange and southwestern Riverside Counties. In light of these factors, we proposed 20,613 ha (50,935 ac) of the approximately 50,000 ha (125,000 acre) base as critical habitat for the gnatcatcher.*

Despite the initial decision and proposal to include this substantial portion of MCB Camp Pendleton as critical habitat, FWS later determined that the development of a gnatcatcher resource management plan by the Marine Corps, contained within MCB Camp Pendleton's Integrated Natural Resource Management Plan, as well as the potential adverse effect that the designation of habitat within critical training areas on the base would have on the operational requirements of the Marines, were sufficient reasons to exclude lands within MCB Camp Pendleton from designation as critical habitat. However, FWS clearly stated in the 2000 *Final Determination of Critical Habitat for the Coastal California Gnatcatcher* that this exclusion did not apply to those lands leased by the California Department of Parks and Recreation for the San Onofre State Beach:

> *We conclude that the benefits of excluding Camp Pendleton exceed the benefits of including the base in the critical habitat designation; further, we have determined that excluding the base will not result in the extinction of the gnatcatcher, as numerous gnatcatcher core areas remain within the final critical habitat designation and sections 7(a)(2) and 9 still apply to the activities affecting gnatcatchers on Camp Pendleton. <u>This exclusion does not include that part of Camp Pendleton leased to the State of California and included within San Onofre State Park (including San Mateo [subunit]).</u> Because these lands are used minimally, if at all, by the Marines for training, the 1,195 ha (2,960 ac) of lands*

> *proposed within the state park are retained in the final designation. These lands do not include lands leased for agricultural purposes.* [emphasis added]

The final critical habitat area designated for the coastal California gnatcatcher therefore includes all 2,960 acres of San Onofre State Beach, including a substantial portion of the project area and over 32 acres[15] within the proposed project's disturbance limits. Although a subsequent lawsuit brought against FWS by TCA and others called into question the economic analysis component of the 2000 critical habitat designation and required FWS to re-initiate the process of designating critical habitat, as stated in the *2003 Reopening of Public Comment Periods for the Proposed Designations of Critical Habitat for the Coastal California Gnatcatcher*, "Areas currently designated as critical habitat for the coastal California gnatcatcher will remain in place until such time as new final regulations for this species become effective." Because revised critical habitat for the gnatcatcher has yet to be finalized and released publicly, gnatcatcher critical habitat areas within SOSB that were designated in 2000 remain in place and valid.

Biological surveys conducted by TCA in 1995 and 2001 recorded the presence of gnatcatchers within designated critical habitat areas within the project area. As stated by TCA in the project EIS, "In the biological study area [gnatcatchers] were recorded at 234 locations in 1995. During the 2001 surveys, an estimated 140 [gnatcatcher breeding territories] were recorded in the survey area." Because the area included within these surveys was both within and outside the coastal zone portion of the project area, TCA compiled a refined document titled, *Focused Summary of Environmental Impacts in the Coastal Zone* to differentiate these areas. The focused summary concludes that, "The proposed project will impact approximately 49.75 acres of coastal sage scrub habitat and three coastal California gnatcatcher [breeding territories] within the project's disturbance limit in the Coastal Zone." In addition, more recent surveys conducted as part of the MCB Camp Pendleton Integrated Natural Resources Management Plan, and included as Exhibit 18, indicate the continued presence of gnatcatchers in and around both San Mateo Creek and San Onofre Creek.

TCA's Response to CCC Report (page 27) disputes the presence of gnatcatchers within the coastal zone by stating that:

> *However, multiple years of data collection documents that not all coastal sage scrub within the coastal zone is occupied by gnatcatchers.*

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[15] Staff of the Commission's Technical Services Mapping Unit have calculated the area of designated gnatcatcher critical habitat within the coastal zone portion of the proposed project's disturbance limits to be 32.36 acres, as demonstrated in the revised Exhibit 15. This calculation differs from the estimate of 49.75 acres provided to Commission staff by TCA due to the fact that TCA's estimate includes all coastal sage scrub within the disturbance footprint while the Commission's estimate focuses solely on coastal sage scrub that is known to be occupied by the coastal California gnatcatcher and has been designated as critical habitat for this species by USFWS.

This statement is refuted for the reasons described on pages 69 through 70 of this staff report, and by the January 16, 2008, letter to the Commission from field biologist Robert Hamilton (Exhibit 4 of the list of exhibits included with the first addendum to the original staff report), which cited recently conducted successful gnatcatcher specific habitat surveys carried out within the proposed project's disturbance footprint before concluding:

> *I have documented that within that portion of the coastal zone that would be impacted by grading for the Foothill Transportation Corridor, four out of five existing stands of coastal sage scrub are generally intact and well-connected to surrounding natural open space areas. Only Area B is too narrow and isolated to be regarded as being valuable as wildlife habitat. The scrub in Area C is lush and healthy, but is probably too chaparral-like to be occupied by California Gnatcatchers. Area A shows signs of prior disturbance, but nevertheless includes approximately 6.4 acres of California Sagebrush-dominated scrub that appears to be suitable for use by gnatcatchers. Areas D and E provide approximately 21.0 acres of high quality habitat for the gnatcatcher. Thus, I have identified approximately 27.4 acres of coastal sage scrub habitat within the proposed limits of grading that I know or expect to support California Gnatcatchers.*

The Commission agrees with Mr. Hamilton's findings concerning the portion of the project footprint along I-5 and described as Area B in his letter as not being considered to be coastal sage scrub ESHA for the gnatcatcher. It should also be noted that Mr. Hamilton's survey did not include all portions of the project footprint within the coastal zone (most notably those sections contiguous with Areas D and E identified by him and near the San Mateo Creek), and accordingly the total area of 27.4 acres he has cited may be an under-representation of occupied gnatcatcher ESHA within the project footprint. Nevertheless, Mr. Hamilton's survey work was successful in identifying several gnatcatchers within the project's disturbance limits within the coastal zone and is illustrative of the continuing use of these habitat areas by the gnatcatcher and the high quality habitat that these areas represent.

As demonstrated in Exhibits 15 and 18, due to the gnatcatcher's affinity for upland coastal sage scrub habitat and its recorded location among these habitats within the project area, those areas determined to be ESHA by the Commission ecologist due to the presence of coastal sage scrub vegetation communities and their importance for the gnatcatcher are contiguous with some areas have also been identified as critical habitat/ESHA for the arroyo toad.

Potential Effects on ESHA and Gnatcatchers

Designated critical habitat within the coastal zone portion of the project area is comprised almost entirely of gnatcatcher occupied coastal sage scrub vegetation, a habitat type which the Commission has repeatedly classified as ESHA, most recently in Consistency Certification CC-004-05 on a portion of MCB Camp Pendleton located south of the project area. Through the proposed removal of nearly 32 acres of gnatcatcher occupied

coastal sage scrub ESHA that has been designated as critical habitat for this species, project activities within the coastal zone have the potential to adversely affect the gnatcatcher population in a variety of ways. As described by TCA in the project EIS, these effects "include, but are not limited to, noise impacts, road mortality from operation and construction… and population decline from habitat fragmentation and degradation of occupied and suitable habitat." The project EIS also states that "Impacts to the [gnatcatcher] from construction include removal, degradation, modification, or fragmentation of [coastal sage scrub] habitat and [coastal sage scrub]/grassland ecotones, especially those communities dominated by California sagebrush and California buckwheat." Additional adverse effects would be caused by vehicle strikes, displacement, destruction of nests, eggs and nestlings, increased competition due to loss of available foraging and breeding areas, and changes in the vegetation community through the spread and colonization of invasive plant species and increased frequency of fires.

Vehicle strikes to gnatcatchers during both the operational and construction phases of the proposed project have the potential to result in increased levels of mortality to this sensitive species due to the sharp increase in the number and speed of cars and trucks within and adjacent to occupied critical habitat areas. TCA has not provided the Commission with sufficient analysis of this potential source of mortality to enable an adequate assessment of its likelihood to compromise the continued existence of this population of gnatcatchers. While the annual number of gnatcatcher mortalities during the operation of the toll road may be high, immediate direct mortalities of juvenile and adult gnatcatchers as a result of construction activities is anticipated to be relatively low, due to the high mobility of gnatcatchers and their ability to flee construction areas. However, the removal of habitat will displace those gnatcatchers with territories in and adjacent to the project's proposed disturbance limits, greatly increasing the population density and competition for resources within remaining habitat areas. In addition, the clearing of occupied territories, if conducted during the breeding season, may potentially result in the destruction and/or loss of gnatcatcher nests, eggs or nestlings.

Regardless of whether or not construction activities occur during the gnatcatcher breeding season, however, proposed project activities include the removal of roughly 215 acres of gnatcatcher occupied coastal sage scrub habitat that has been designated as critical habitat. Of these 215 acres, approximately 32[16] acres would be located within the coastal zone portion of the project's disturbance limits. These nearly 32 acres would support project construction activities for approximately three years and would experience substantial amounts of grading activities and vegetation clearance. TCA has not proposed mitigation for this use of coastal sage scrub ESHA and gnatcatcher critical habitat within the coastal zone.[17] Additionally, because the proposed project includes the

[16] As demonstrated in the revised Exhibit 15 and calculated by Commission Mapping staff.
[17] Areas proposed by TCA to serve as mitigation for the loss of coastal sage scrub within the coastal zone are located approximately 12 to 16 miles inland from the coastal zone boundary and are therefore considered to be inappropriate mitigation for impacts to coastal resources.

placement of one of the primary construction staging areas and approximately one year of pile driving (six months for each of the two elevated toll road "flyways") within this 32 acre footprint, it is likely that elevated noise levels would extend well into adjacent areas during the construction phase of the proposed project.

As described in the December 2003 document titled *Noise Assessment for Southern Orange County Transportation Infrastructure Improvement Project* provided by TCA, anticipated noise levels of 65 decibels or more would extend at least 2800 feet in all directions and encompass approximately 565 acres of adjoining habitat during pile driving activities. This elevated noise footprint would extend well beyond the proposed project's defined disturbance limits and would therefore include a substantially larger area of gnatcatcher critical habitat than that which would be directly removed through grading and vegetation clearance. Elevated noise levels in and adjacent to gnatcatcher occupied areas have the potential to adversely effect this species by increasing the number of times that gnatcatchers are flushed from the area and interrupting or drowning out breeding and territory demarcation calls.

As detailed in the *Final Determination of Critical Habitat for the Coastal California Gnatcatcher*, the habitat area within San Onofre State Beach and MCB Camp Pendleton, including the 32.36 acres proposed to be used by TCA during the construction and operational phases of the proposed project, represents not only a breeding area for gnatcatchers but also provides a vital linkage between several important gnatcatcher populations. The continued existence of this linkage is important to maintain genetic exchange between separate populations and is essential to preserve the genetic diversity of the species and thereby augment its ability to adapt to environmental changes, including those induced by climate change. The permanent and temporary loss of these 32.36 acres has the potential to lower the overall carrying capacity of the greater habitat area for which these acres are a part by reducing the amount of available forage and breeding habitat. Furthermore, the 32.36 acres that are proposed to be removed consist of one of California's most imperiled vegetation and habitat communities, coastal sage scrub. Within San Diego County this habitat type has routinely been designated as ESHA by the Commission (in CDP numbers 6-03-098, 6-03-099 and Consistency Certification CC-004-05, for example). Although re-vegetation of disturbed project areas with native plant species is proposed to occur upon completion of construction activities, the amount of time required for this re-vegetation process to be completed would preclude this area from becoming viable gnatcatcher habitat for at least several years post-construction. In addition, TCA has not provided sufficient details regarding proposed re-vegetation activities to allow the Commission to assume that the specific suite of plant species required for gnatcatcher habitat would be returned to those areas disturbed by project activities. While TCA has proposed mitigation for these disturbed and occupied acres of coastal sage scrub in the form of habitat restoration and preservation, the area proposed to be restored and preserved would be located approximately 12 to 16 miles outside of the coastal zone and therefore would not mitigate the loss of coastal resources.

As mentioned previously, the gnatcatcher is characterized by its strong site fidelity and aggressive territoriality. Once a gnatcatcher pair establishes a territory, that area is vigorously defended from use and intrusion by other gnatcatchers. These characteristics of the gnatcatcher would severely limit the ability of gnatcatchers with territories that would be disturbed or destroyed by the proposed toll road from successfully reestablishing territories in gnatcatcher occupied areas. Displaced gnatcatchers may experience mortality or reproductive declines if unable to rapidly and successfully reestablish a territory. In addition, even if displaced gnatcatchers are able to become successfully reestablished, it is likely that all nearby gnatcatchers would suffer due to increased competition for remaining suitable habitat and prey. In effect, the removal of approximately 32 acres of gnatcatcher occupied sage scrub habitat would substantially increase competition in the remaining habitat areas and may result in a cascading effect of territory displacement and crowding of remaining areas. These effects may adversely affect a larger portion of the gnatcatcher population in and around the project area than would otherwise be expected due to the direct loss of habitat due to the placement of the toll road alone.

In addition to the adverse affects associated with direct loss of habitat and mortality during the construction phase of the project, the proposed operation of the toll road may also increase the likelihood of fires occurring within gnatcatcher habitat surrounding the proposed toll road route. Studies have demonstrated a direct link between increased human access and use of an area, especially through the placement of a road, and increased prevalence of accidental and intentional fires. The proposed placement of the toll road within an area of sage scrub habitat that is typically dry and fire-prone would drastically increase the human use of this area and the number of fire ignitions from vehicle sparks, discarded cigarettes and arson may experience a corresponding rise as well. Because of the gnatcatcher's preference and use of fire-prone habitat, these birds are susceptible to adverse affects from fire including habitat loss and mortality.

In response to the Commission's analysis of the increased risk of fire due to the increased vehicular use and public presence in fire prone areas transited by the proposed toll road, *TCA's Response to CCC Report* states that:

> *Contrary to staff's conclusions (e.g. 58) the project will not substantially increase the risk of wildfire. The proposed project would provide increased public access to the study area; however, the entire alignment would be fenced, in part, to restrict access from adjacent land uses… Coastal Commission staff ignores the fact that the proposed project enhances the ability of firefighters to move fire protection resources from one aera to another using the corridor and the firebreak properties that the road provides in the even of a wildfire. These benefits were realized during the devastating Santiago Canyon Fire (2007) that burned nearly 30,000 acres in Orange County as well as in the Anaheim Hills fire in February 2006 and for the Coto de Caza/Rancho Santa Margarita fire in May*

> *2002. During these wild fires, the toll road served not only to provide emergency vehicle access to fire areas and evacuation routes for residents, but was also used effectively as a fire "break" for the control and containment of fire.*

The Commission's previous conclusions regarding the proposed project's potential to increase the incidence of fire ignitions within the project area is supported by a January 22, 2008, letter to the Commission from wildland firefighter and director of the California Chaparral Institute, David Halsey (Exhibit 9 of the list of exhibits included with the first addendum to the original staff report) which states:

> *The Coastal Commission's staff report correctly concluded that the toll road would "increase the likelihood of fires occurring within gnatcatcher habitat surrounding the toll road route." The TCA's response that the project would "not substantially increase the risk of wildfire" is simply unsupported.*
>
> *TCA notes that the "entire alignment would be fenced, in part, to restrict access from adjacent land uses." But the absence or presence of fencing has nothing to do with whether or not a road increases fires risk. The mere presence of vehicles and associated passenger activities, accidents, and equipment malfunctions dramatically increase fire risk. This is why so many fires originate next to roads. For example, road activity is one of the primary causes of fire starts within the Cleveland National Forest. I have attached a map showing the origins of fires within the Descanso Ranger District of the Cleveland National Forest. As you can see, a significant percentage of fire starts occur along the I-8 corridor (USFS 2007).*
>
> *To state that the presence of a major road like the proposed Foothill-South in a fire-prone shrubland ecosystem would not increase fire risk is contrary to all the data concerning wildland fires in southern California (UWM 2006). TCA's argument that the toll road would provide access to firefighters, might act as a fire break, and would include mitigation measures such as warning signs and call boxes, does not mitigate the increased fire risk the road would cause. During increasingly frequent extreme fire weather conditions, wind-driven wildland fires usually jumped multi-lane interstate highways. And while firefighting resources can certainly use the toll road, the increased fire risk the road brings to the landscape is not an acceptable trade off. The TSA's reference to the 2007 Santiago Canyon fire and the 2006 Anaheim Hills fire as evidence large roads can be an advantage during wildfire events, is not compelling.* ***The Santiago fire jumped over the 241 Toll Road several times.*** *The more important issue is that we could dramatically reduce fire starts in the first place by eliminating roads through fire-prone environments.* [emphasis in original]

Similar support is provided in another recent letter (Exhibit 10 of the list of exhibits included with the first addendum to the original staff report), also dated January 22, 2008, from USGS research ecologist Jon Keeley which states:

> *We live in a part of the world in where humans play the dominate role in determining when and where fires occur. In southern California several studies have shown that fires are over-whelmingly tied to roads. In many parts of the region a map of where fires ignite is often nearly a carbon copy of a road map* [see figure provided with Exhibit 9 of the list of exhibits included with the first addendum to the original staff report]. *These fires come about through both accidental ignitions such as sparks from catalytic converters as well as carelessness of discarded cigarettes. It is a well established fact that when new roads are established they bring with them a greatly increased incidence of fires.*
>
> *Although roads of the scale of the toll road have the potential for acting as a fire break, which diminishes fire spread, this is generally only true under moderate weather conditions. However, under the weather conditions that lead to our most destructive fires, roads and even major highways seldom act as a barrier to fire spread.*
>
> *In short, when considering projects such as this new road, it is important that the Commission factor in the likelihood of increased fire incidence on the landscape and the costs this will likely have both on communities as well as the devastating impacts that frequent fires have on natural resources.*

Mitigation

To reduce the magnitude and likelihood of impacts to the coastal California gnatcatcher identified by TCA, TCA has proposed several mitigation measures. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the gnatcatcher:

> *<u>Measure TE-18</u>. To minimize and offset adverse effects of the selected alternative on the coastal California gnatcatcher, habitat suitable for this species (as determined by the Project Biologist) shall be grubbed from the project footprint area from September to February if feasible (generally outside the breeding season for these species). The Project Biologist shall survey the suitable habitat within the areas to be grubbed one day prior to any vegetation disturbance to determine the location and numbers of coastal California gnatcatchers. The Project Biologist will be on-site and present during all suitable habitat clearing and removal activities to minimize the potential for individual coastal California gnatcatchers to be wounded or killed during the clearing of habitat.*

> *Measure TE-19. If grubbing activities are unavoidable during the coastal California gnatcatcher breeding season, which is between February and August, the following measures will be implemented:*
>
> *Surveys by the Project Biologist will be conducted a minimum of three times on separate days after the initiation of the nesting season to determine the presence of coastal California gnatcatchers, nest building activities, egg incubation activities, or brood rearing activities. These surveys will be conducted within the week prior to the initiation of brushing, grading, or other construction activities. One survey will be conducted the day immediately prior to the initiation of work. The USFWS will be notified in writing seven days prior to the initiation of surveys.*
>
> *If no nest(s), nesting behavior, or brood rearing activities are detected, work may commence. Prior to and during work activities, the Project Biologist will locate any individual coastal California gnatcatchers on-site and direct operators to begin in an area away from the birds. The pattern of brushing/grubbing activities will be designed to optimize opportunities for flushed birds to be directed towards the open space areas in the vicinity of the impact area. During construction, no activity will occur within approximately 150 m (500 ft) of active nests.*

Although these measures have the potential to reduce the likelihood of mortalities to gnatcatchers during the breeding season, these measures do not provide a guarantee that construction activities, grading and vegetation clearance would not occur within gnatcatcher occupied areas during the breeding season. In addition, the potential success of surveys conducted by the project biologist to detect the occurrence of nests, nesting behavior or brood rearing activities remains uncertain and unproven. Furthermore, although the commitment to restrict activity to those areas at least 500 feet away from active nests would protect these nests from destruction, increases in construction activities, noise and habitat destruction – even if conducted at least 500 feet from nests - would likely increase the potential for these nests to be abandoned. The provision in mitigation measure TE-18, described above, that would require the presence of the project biologist during habitat clearing and removal activities within gnatcatcher occupied areas would also provide no guarantee that mortalities would be avoided. Finally, these measures would be unable to offset the anticipated adverse effects on the gnatcatcher resulting from the destruction and loss of occupied habitat. Although some of these habitat areas may eventually be re-vegetated with the specific community of vegetation types required as habitat by the gnatcatcher, TCA has provided insufficient detail regarding their re-vegetation plans to assume that this will indeed occur. Re-vegetation would also require several years to be completed and the habitat would remain lost and unsuitable for gnatcatcher occupation during that interval.

TCA's Response to CCC Report (page 28) draws attention to additional mitigation proposed to be carried out in association with the proposed project:

> *Further confounding the evaluation of project impacts, the Staff Report ignores the conservation importance of the mitigation strategy for impacts to the coastal California gnatcatcher. TCA implemented the USFWS-recommended mitigation measure of protecting over 1,182 acres within its Upper Chiquita Canyon Conservation Area.*

In numerous instances the Commission has historically found mitigation carried out outside of the coastal zone may not be adequate compensation for the loss of coastal resources. Regarding the Upper Chiquita Canyon mitigation area, it should be noted that this area is several miles inland of the coastal zone and mitigation carried out in this area is therefore not expected to result in any meaningful minimization or compensation for coastal zone resources. Furthermore, the importance of the gnatcatcher occupied coastal sage scrub habitat within the project's disturbance limits has not been contested by TCA nor has the conclusion that this area be considered as ESHA.

Regarding mitigation, *TCA's Response to CCC Report* (page 28) also notes that:

> *In addition to the significant conservation benefits provided by the protection and restoration of Upper Chiquita Canyon Conservation Area, TCA has identified an additional 150 acres of coastal sage scrub for restoration within Crystal Cove State Park.*

Although this area has indeed been identified for restoration by TCA, substantial information exists which suggests that it would be inappropriate to assume that the proposed project would facilitate this restoration work. Foremost, it is the Commission's understanding that the offer of $100 million to the California Department of Parks and Recreation carries no requirements in terms of what this money would be used for. In other words, although TCA has identified a variety of potential projects, there is no guarantee or reason to suggest that any of these projects would be carried out as a result of TCA's contribution to the State Park budget. Furthermore, as stated in a January 10, 2008, letter to the Commission from Dr. Wayne Spencer (Exhibit 2 of the list of exhibits included with the first addendum to the original staff report):

> *I understand that the Transportation Corridor Agency (TCA) is proposing to mitigate for impacts to CSS [coastal sage scrub] by restoring 150 acres of CSS habitat at CCSP [Crystal Cove State Park]. However, according to David Pryor, District Ecologist with the California Department of Parks and Recreation (personal communication, 7 January 2008), in accordance with State Park General Plan policies, all appropriate CSS and other habitat restoration at the park is ongoing, and hundreds of acres (including about 220 acres of CSS) have already been restored. The remaining acreage will be restored regardless of TCA's proposal, and the amount of potential additional CSS restoration is only*

> *"in the tens of acres" according to David Pryor (personal communication)* [emphasis added].

Conclusion
In addition to directly removing and occupying 32 acres of gnatcatcher occupied coastal sage scrub ESHA during the construction phase of the proposed project, the project also has the potential to indirectly and directly cause mortality to this endangered species during both the construction and operational phases of the proposed project. Adverse affects resulting from habitat loss, increased resource competition, interruption of breeding activities, reduced reproductive success, increased incidence of wildfire, loss of population linkages, and loss of nests, eggs and juvenile or nestling birds have the potential to negatively affect the gnatcatcher population throughout the region. In addition, the effects of elevated noise and construction activities may result in adverse impacts to gnatcatchers well beyond the 50 acres identified by TCA as within the immediate construction footprint. As described in the introduction to this section, Section 30240 of the Coastal Act specifies that "…*only uses dependent on those resources* shall be allowed within … [environmentally sensitive habitat] areas." The proposed use of 32 acres of ESHA for the construction and placement of a toll road is clearly inconsistent with this Coastal Act policy.

Least Bell's Vireo
The least Bell's vireo (*vireo belie pastilles*) is a small migratory songbird that feeds primarily on insects and typically inhabits dense, willow dominated riparian habitats with lush under story vegetation, which is limited to the immediate vicinity of water courses. The least Bell's vireo (henceforth referred to as vireo) typically forages and nests within areas of riparian vegetation but studies cited in the 1986 vireo Endangered Species Act listing document, *Determination of Endangered Status for the Least Bell's Vireo*, indicate that as much as 50% of feeding occurs in upland areas of coastal sage scrub and chaparral as well. The vireo typically migrates to breeding areas in southern California between March and April of each year and remains until late August or September when it departs for wintering areas in Mexico. Upon arrival, male vireos establish and defend breeding territories by singing to announce and demarcate territory boundaries and by physically chasing intruders. Territories typically range in size from 0.5 to 7.5 acres.

Historically, the vireo occupied riparian habitats from northern California to northwestern Baja California and was found as far eastward as Owens Valley, Death Valley and the Mojave River. Regional declines in vireo populations became apparent in the 1940s and by the 1980s the central California populations were believed to have been extirpated and over two-thirds of formerly occupied localities were devoid of vireos. Currently, the worldwide distribution of vireo is restricted to southern California south of the Tehachapi Mountains and several locations in Baja California.

In response to the dramatic decline of the vireo population and widespread loss of its riparian habitat, the vireo was listed as endangered by the State of California in 1980 and

by the U.S. Fish and Wildlife Service in 1986. As required under the federal Endangered Species Act, critical habitat was designated for the vireo in 1994. At the time of listing, the U.S. population had plummeted to only 291 known active vireo territories and the historic distribution had been restricted to less than 5% of its former range, with greater than 99 percent of remaining territories concentrated in southern California and 77 percent of those within San Diego County alone. As stated in the 1986 ESA listing document, *Determination of Endangered Status for the Least Bell's Vireo*, no other perching songbird species in California is known to have declined as dramatically as the vireo. This situation has changed only slightly in the thirty one years since listing and although the current population is estimated at approximately 3,000 territories, the known range remains restricted to southern California and Baja exclusively. Of the 46 California localities known to support breeding populations of the vireo in 1986, all but 7 supported less than 10 breeding pairs.

The primary cause of vireo population decline prior to listing has been attributed to loss of habitat due to agricultural and water control practices, urbanization, and the spread of invasive exotic plants in prime vireo habitat areas. Reduced nesting success due to high levels of nest parasitism by the brown-headed cowbird has also been identified as a contributing factor.

Designated vireo critical habitat includes roughly 38,000 acres in ten locations in six southern California counties. The critical habitat designation for the vireo identifies the primary constituent elements that support feeding, nesting, and sheltering and that are essential to the conservation of the species as including riparian woodland vegetation that generally contains both canopy and shrub layers and some associated upland habitats. Although no designated critical habitat for this species is included within the project area, as demonstrated in Exhibit 19, the least Bell's vireo has been recorded at several locations within the project's disturbance limits and occupied habitat exists within the riparian areas of both San Mateo Creek and San Onofre Creek. As stated by TCA in the document titled *Focused Summary of Environmental Impacts in the Coastal Zone*:

> *Territorial least Bell's vireos were observed at 16 locations in the study area during the 1995 surveys. All but one of the observations occurred along San Mateo Creek. During the 2001 surveys, a minimum of at least 27 least Bell's vireo use areas were recorded in the study area…All previously recorded least Bell's vireo locations in all impact areas of the various [toll road] alternatives were confirmed during 2003 focused surveys…Within the coastal zone, one territory of the least Bell's vireo was identified within San Mateo Creek.*

As Exhibit 20 demonstrates, vireos were recorded within the coastal zone directly adjacent to the proposed project's disturbance limits, suggesting that the territory for these birds includes areas within the project footprint.

In addition, more recent surveys conducted as part of the MCB Camp Pendleton Integrated Natural Resources Management Plan indicated as many as 68 vireos at various locations along San Mateo Creek and 56 vireos along San Onofre Creek (as shown in Exhibit 19).

Due to the rarity of this species and its sensitivity to habitat loss and disturbance, primary causes of its decline, the Commission's staff ecologist has determined that vireo occupied riparian habitat within the coastal zone portion of the project area meets the Coastal Act definition of ESHA. As demonstrated in Exhibits 15 and 19, due to the affinity of this species for riparian habitat and its recorded location among these habitats within the project area, areas designated as ESHA by the Commission ecologist due to their importance for the vireo have also been identified as wetlands and critical habitat/ESHA for the tidewater goby and arroyo toad (as discussed above). These wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

TCA's Response to CCC Report (page 11), through an excerpt from the letter TCA consultant Dr. Dennis Murphy submitted to the Commission, refutes this conclusion be stating:

> *The salient fact is that today in the San Mateo and San Onofre watersheds alone there are nearly half as many vireos than existed statewide at the 46 locations that were occupied when the bird was granted federal protection in 1986. While not yet formally designated as "recovered" by FWS, the least Bell's vireo has experienced one of the greatest reversals in population trend of any federally protected species in California. Given that the toll road project will directly impact just over one and a half percent of the current local "population" of least Bell's vireos, and substantially less than a tenth of one percent of current regional numbers of the species, an independent scientific assessment of impacts on the vireo would not agree with staff that the proposed project is "inconsistent with the environmentally sensitive habitat resource protection requirements" in the Coastal Act.*

Although Dr. Murphy has not provided citations to support the figures noted in his letter, it can be presumed that the population increase that the least Bell's vireo has achieved over the past several decades can be attributed, at least in part, to the fact that as a species listed both federally and by the State of California as endangered its breeding and foraging habitat has been granted a high level of protection. A reversal of this positive trend towards recovery would therefore likely occur if these protections were removed and destruction of these vital habitat areas was permitted to occur. In addition, by citing the large number of vireos that currently exist within the San Onofre Creek and San Mateo Creek watersheds, Dr. Murphy reinforces the importance of these riparian habitat areas to the continued recovery and conservation of the species. Such information is not surprising considering the fact that these watersheds are some of the last remaining intact

watersheds in southern California and lends support to the Commission determination to consider least Bell's vireo occupied habitat within the proposed project's disturbance footprint as ESHA.

Potential Effects on ESHA and Vireos
Similar to those potential impacts detailed in the above section on gnatcatchers, the proposed project also has the potential to cause direct and indirect adverse effects to the least Bell's vireo and its occupied and potentially occupied habitat areas. As described by TCA in the project EIS:

> *Impacts to* [least Bell's vireo] *from construction include removal, degradation, modification, and fragmentation of occupied or potential occupied riparian habitats. All the* [toll road] *alternatives, with the exception of the I-5 alternative, would directly affect* [vireo] *occupied habitat. Additionally, noise and lighting from bridge construction along or across drainages where this species occurs or potentially occurs would result in indirect impacts.*
>
> …
>
> *Long term impacts to* [vireos] *include noise, lighting, habitat fragmentation, and invasive species…*

In addition to the above specific impacts to vireos identified by TCA, many of the adverse affects identified by the project EIS in relation to non-listed bird species would also apply to the vireo:

> *Direct impacts to these species would consist of the mortality of animals that occupy or temporarily reside in habitats located within the impact footprint and the blockage/preclusion of movements necessary for foraging, breeding or other requisite life history behaviors. In addition, the removal of habitats that contain food or other resources necessary for individuals located outside the impact area may cause additional direct mortality if these are necessary for survival and/or cause deleterious competitive interactions between remaining individuals.*

Furthermore, vireos may also be adversely affected by vehicle strikes during construction and operation of the proposed toll road and destruction or abandonment of occupied nests during construction.

Direct mortality through vehicle strikes would be likely to increase with the proposed project due to the substantial increase in vehicle traffic within vireo occupied areas that is anticipated to result from construction of both the proposed toll road and the proposed military access road adjacent to San Mateo Creek. Although the proposed toll road would be elevated above vireo occupied and potentially occupied riparian areas along San Mateo Creek and may therefore remain outside of vireo use areas, during the three

year construction phase, large pieces of heavy equipment and machinery would be on the ground and adjacent to the creek and riparian habitat for long periods of time. In addition to the increased likelihood that vireos may experience mortality through accidental interactions with these machines, the proposed project also includes the construction of an access road along San Mateo Creek and beneath the I-5 freeway bridge. The use of this access road would permanently increase the number of vehicles operating within close proximity to vireo occupied habitats and thus permanently increase the number and likelihood of future vehicle strikes.

The proposed temporary and permanent use of vireo occupied breeding territories and habitats during construction and operation would likely result in the displacement of those breeding individuals with territories located adjacent to or within the project area. The displacement of these birds into adjoining habitats may constrain remaining occupied habitat and increase competition for resources, potentially affecting the reproductive and foraging success of both displaced individuals and adjoining territory holders as well. Furthermore, although vireo surveys conducted by TCA suggest that only one breeding territory is within the immediate disturbance footprint, the proposed use of this area for three years to conduct grading, pile driving and other loud, heavy equipment oriented activities may affect vireos in areas outside of the disturbance limits but within the area affected by elevated construction noise. These effects may continue during the operational phase of the proposed project as well because the proposed use of the toll road is anticipated to increase existing noise levels. The project EIS discusses the potential for increased construction and operational noise to adversely affect vireos and other songbirds within the project area:

> *Long-term noise impacts from traffic would impact habitat that supports threatened or endangered avian species such as* [the vireo] *and* [gnatcatcher]…
>
> *The individual impacts of noise* [on wildlife] *are not well quantified, and there are no regulatory or scientific thresholds for determining an adverse impact. To date, most of the interest has been focused on response of avian species to noise, because of their reliance on auditory cues for selecting a mate, territory defense, and predatory alerts.*
> …
>
> *One study addressing noise was conducted by Forman and Alexander (1998). They reported that traffic noise may increase stress hormones, alter behaviors, interfere with communication during breeding, produce sensitivity to different frequencies, and create harmful decreases in food supply in avian species…* [C]*onstant* [traffic] *noise may interfere with avian species' ability to hear communication signals, which they rely on for mating and alerting other individuals of danger, monitoring young development, and detecting predators. Traffic noise may also change the perceived location of the bird signals and must reduce the distance where signals are heard or interpreted.*

Although TCA demonstrates in the project EIS that the effects of noise on birds is still being researched and definitive conclusions have yet to be made, several studies and projects are referenced in which a noise impact threshold of 60 decibels was established. These references include a southern California roadway detour project through vireo breeding habitat in which "USFWS identified that the noise level at the loudest hour would be 60 dB of A-weighted sound (dBA) and therefore used 60 dB as the criteria for mitigation…" and a Caltrans biological study that measured the traffic sound levels at various vireo nest sites near a proposed project and determined "The loudest hour noise level averaged 61 dBA [which] became the noise level mitigation criterion for that project." Although neither study conclusively determined that "vireo nesting did not occur or that breeding success would be jeopardized at noise levels above 60 dB" the 60 decibel level was nevertheless determined to be appropriately precautionary.

Furthermore, the results of these studies may indicate an environmental or habitat preference of vireos to locations with low to moderate ambient sound levels. The absence of occupied vireo territories in apparently suitable riparian habitat along portions of both San Mateo and San Onofre Creeks that are within close proximity to the existing I-5 freeway may lend further support to this theory and suggest a sensitivity of this species to the high levels of noise produced by a large multi-lane highway. If vireos are indeed sensitive to noise factors when selecting breeding territories or nesting sites, the placement of the proposed toll road may result in the indirect loss or destruction of several of the vireo territories that are not located adjacent to the project footprint but may nevertheless be within sufficient distance to be rendered unsuitable for vireo use due to increased noise levels.

If, for conservative purposes, the 60 decibel threshold level were to be considered for this project, the project "disturbance limits" established by TCA would need to be expanded outward. At present, these limits extend approximately 100 feet beyond each of the proposed support structure locations of the toll road elevated "flyways" within the San Mateo Creek riparian corridor. TCA has proposed that each of these locations would support pile driving activities for up to several weeks. Therefore, based on the noise assessment, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, provided to the Commission staff by TCA that estimates the noise produced by pile driving to remain at 65 decibels 2800 feet from the site of the activity. Therefore, the 60 decibel sound contour would extend outward well over 2800 feet further than the current "disturbance limits." During the one year of proposed pile driving required to construct the proposed elevated "flyway" structures, this anticipated area of elevated sound would include substantially more occupied and potentially occupied vireo habitat than the physical construction footprint. For instance, each proposed pile driving location would result in approximately 565 surrounding acres subjected to sound levels of 65 decibels or more.[18] For reference, 65 decibels has been

[18] Based on the area of a circle with a radius of 2800 feet.

recognized as the sound level at which human speech interference occurs. Whether or not this habitat would be sufficiently degraded by these noise levels to cause it to be abandoned or rejected by breeding vireos remains uncertain. However, the existing level of understanding regarding vireo habitat preferences suggests that such an outcome would not be unlikely.

Elevated sound levels would also be produced during the operation of the proposed toll road, substantially altering the existing sound environment of the area surrounding the proposed project. In contrast to the construction noise levels that would continue for several years but would ultimately cease, elevated noise levels from traffic on the proposed toll road would continue indefinitely, permanently altering the area and potentially degrading its potential to provide productive habitat for the least Bell's vireo. Based on sound modeling described within the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* produced for TCA, anticipated operational sound levels from the toll road would approach 60 decibels at a distance of over 500 feet.[19] Although sound propagation distances are highly variable and dependant on environmental factors such as topography and vegetation, this distance would extend approximately 400 feet beyond the edge of the disturbance limit identified by TCA and encompass substantially more habitat.

The increased shading produced by the proposed toll road as well as its physical presence may also adversely affect vireo habitat. Indeed, the established habitat preferences of the vireo demonstrate an apparent affinity for areas with open sky above the upper riparian canopy layer, suggesting that the presence of the two proposed elevated "flyways" may be inconsistent with the vireo's habitat requirements. In addition, the increased levels of shade produced by the elevated toll road structures may alter the composition and abundance of riparian vegetation within the project's shade footprint, potentially degrading habitat areas that are currently suitable for the vireo.

In addition to the potential loss of vireo habitat due to the shading and sound presence of the proposed toll road, TCA identifies that within the coastal zone, the proposed project would also require the temporary use or disturbance of approximately 19.12 acres of riparian habitat during the three year construction phase and the permanent loss of approximately 0.16 acres due to the placement of "flyway" support structures. Although, as detailed in Section B of this report (Wetlands), the accuracy of these figures is called into question by the inadequacy of the wetland delineation provided to Commission staff by TCA, the temporary and permanent loss of this amount of vireo occupied or potentially occupied ESHA would nevertheless result in adverse affects to the local population. Vireos within and surrounding the approximately 19 acres of riparian habitat included within the proposed project's disturbance area would potentially be displaced by construction activities and vegetation clearance, may lose or abandon nests, young and/or

[19] As described for the nearest sound receptor to San Mateo Creek, receptor 009 located approximately 500 feet from the edge of the proposed toll road and within San Mateo Campground.

important foraging areas and may increase resource competition within adjoining habitat areas.

Mitigation
To address the adverse impacts to the least Bell's vireo identified by TCA in the project EIS, several mitigation measures have been proposed. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the vireo. Although the project EIS does not include least Bell's vireo mitigation measures in the analysis of the proposed toll road, mitigation measures that are proposed to be applied to several of the other toll road alternatives are discussed below:

> *Measure TE-20. To minimize and offset adverse effects of the selected alternative on the least Bell's vireo, suitable habitat for this species, as determined by the Project Biologist, shall be grubbed from the impact area from 16 September to 14 March (generally outside the breeding season for this species), if feasible.*

While this measure has the potential to minimize the loss of active or occupied vireo nests and reduce the likelihood of adult or juvenile vireos suffering mortality resulting from grading and vegetation removal activities during the breeding season, by stating that these activities will only occur outside of the breeding season "if feasible," this measure provides no assurance that all suitable vireo habitat will be "grubbed" outside of the breeding season. The conditions for a feasibility determination are not described and similarly, the criteria that would be employed by the project biologist to determine which riparian habitat areas are suitable for the vireo are not detailed either. Furthermore, given the strong site fidelity of vireos and their potential to occupy the same breeding territories on successive years, the removal of suitable vireo habitat during the non-breeding season may adversely affect breeding vireos when they return from their migration to encounter a degraded or destroyed former territory area. Given the lack of firm commitments and specificity of this mitigation measure, it is uncertain whether or not this measure would produce a positive benefit for the species or even if it would appreciably reduce the magnitude of the anticipated impact. Additionally, whether or not vireo habitat would be removed during or after the breeding season, at least 5.24 acres of riparian ESHA would still be lost, resulting in a variety of impacts to vireos that occupy or use that habitat.

> *Measure TE-21. If grubbing activities between 15 March and 15 September (generally within the breeding season for the least Bell's vireo) are unavoidable, the following contingency measures will be implemented:*
> *a. Surveys by the Project Biologist will be conducted a minimum of three times on separate days after the initiation of the nesting season to determine the presence of least Bell's vireos, nest building activities, egg incubation activities, or brood rearing activities. These surveys will be conducted within the week prior to the initiation of brushing, grading, or other construction activities. One survey will be*

conducted the day immediately prior to the initiation of work. The USFWS will be notified in writing prior to the initiation of surveys.
b. If no nest(s), nesting behavior, or brood rearing activities are detected, work may commence. Prior to and during work activities, the Project Biologist will locate any individual least Bell's vireos on-site and direct operators to begin in an area away from the birds. The pattern of brushing/grubbing activities will be designed to optimize opportunities for flushed birds to be directed towards the open space areas in the vicinity of the impact area.
c. During construction, no activity will occur within approximately 150 m (500 ft) of active nests.

Although these measures have the potential to reduce the likelihood of mortalities to vireos during the breeding season, these measures do not provide a guarantee that construction activities, grading and vegetation clearance would not occur within vireo occupied areas during the breeding season. In addition, the potential success of surveys conducted by the project biologist to detect the occurrence of nests, nesting behavior or brood rearing activities remains uncertain and unproven. Furthermore, although the commitment to restrict activity to those areas at least 500 feet away from active nests would protect these nests from direct destruction, increases in construction activities, noise and habitat destruction – even if conducted at least 500 feet from nests - would likely increase the potential for these nests to be abandoned. Finally, these measures would be unable to offset the anticipated adverse effects on the vireo resulting from the destruction and loss of occupied habitat. Although some of these habitat areas may eventually be re-vegetated with the specific community of riparian vegetation types required as habitat by the vireo, TCA has provided insufficient detail regarding their re-vegetation plans to assume that this will indeed occur. Re-vegetation would also require several years to be completed and the habitat would remain lost and unsuitable for vireo occupation during that interval.

Measure TE-22.
a. To minimize indirect disturbance of nesting least Bell's vireos, the Contractor will not engage in any construction activities within 61 m (200 ft) of occupied least Bell's vireo habitat between the hours of 0600 and 1100 every day during the peak nesting period of 1 April to 15 July of any given calendar year if said construction activities result in noise readings greater than 60 dBA measured at the edge of the territory of the vireo in the area.
b. For construction, temporary or permanent noise barriers may be installed under the direction of the Project Biologist and USFWS to reduce noise levels. The Project Biologist shall be responsible for monitoring the noise level.
c. The Project Biologist shall be responsible for all noise monitoring reports which shall include, at a minimum, (1) baseline noise measurements at known least Bell's vireo nesting sites within riparian communities within the impacts area, prior to construction, (2) the effect construction noise has on nesting pairs in the vicinity of construction, (3) baseline noise measurements at known nesting

> *adjacent to the alignment, prior to traffic, and (4) the effect traffic noise has on nesting pairs in the vicinity of the selected alignment. These reports will be submitted to the TCA or other implementing agencies.*

This measure, intended to minimize the project's anticipated noise impacts, is inadequate for several key reasons. Foremost, the initial commitment to restrict construction activities that would result in sounds levels greater than 60 decibels at the edge of vireo occupied territories would apply only to those construction activities conducted within 200 feet of vireo territories and would therefore not be applicable to pile driving activities that may result in sound levels of 65 decibels even when located fourteen times farther away- at a distance of 2800 feet from the vireo territory area. Pile driving activities are by far the loudest component of project construction and are proposed to be extensively used for long periods of time in close proximity to vireo occupied and potentially occupied riparian habitat areas. The fact that these activities may be exempt from this measure, if conducted more than 200 feet from occupied vireo territories, calls into question the potential effectiveness of this measure. In addition, this measure does not consider the operation of the proposed toll road that may subject large areas of vireo occupied and potentially occupied habitats to sound levels greater than 60 decibels as well.

The commitments included in this measure to possibly install temporary or permanent noise barriers and compile noise monitoring reports that would document the effect that traffic noise has on nesting vireo pairs in the vicinity of the proposed toll road also do not qualify as guarantees that noise impacts on vireos will be avoided or minimized. Details regarding the type, size and location of noise barriers that would be considered are necessary to adequately assess their potential effectiveness while the documentation of noise related impacts to vireos by the project biologist would do nothing to reduce the occurrence of these impacts.

In addition, as described in Section B of this report (Wetlands), to address impacts associated with the proposed permanent placement of elevated "flyway" support structures on 0.16 acres of wetlands, TCA has conceptually proposed to restore and create a one acre area of southern willow woodland adjacent to the proposed water treatment extended detention basin #2 in an area that is currently occupied by an irrigated agricultural field. When completed this woodland area may provide suitable habitat for the vireo. The one acre area would be located within close proximity to both the toll road connector and the existing I-5 freeway however. In light of the discussion included above regarding the potential sensitivity of the vireo to elevated sound levels, this location may not be colonized by vireos.

With regard to wetland areas temporarily affected through construction of the proposed toll road, as described by TCA in the document titled, *Conceptual Habitat Mitigation and Monitoring Plan for Impacts to Areas within the Jurisdiction of the United States Army Corps of Engineers, the Regional Water Quality Control Board, the California*

Department of Fish and Game and the California Coastal Commission, "the applicant will re-contour and re-vegetate all temporarily impacted areas at a 1:1 ratio to replace pre-construction aquatic function." As noted above, this proposed restoration of wetland areas would likely require the passage of several years to be completed and would provide only marginally suitable habitat to vireos during this interval.

Conclusion
Overall, the proposed project includes the use and possible temporary destruction of at least 5.24 acres of vireo occupied and potentially occupied riparian ESHA within the project area as well as the potential degradation of considerably more essential habitat due to the effects of shading and noise during construction and operation of the toll road. These proposed activities are not uses dependant on ESHA and are therefore not allowable uses of ESHA, as defined by the Coastal Act. Through increased resource competition, increased potential for vehicle strikes and the possible removal of essential habitat during the breeding season, the proposed project also has the potential to result in direct mortality to a State and federally listed endangered species. The Commission therefore finds the proposed project to be inconsistent with the environmentally sensitive habitat resource protection requirements contained within Coastal Act Section 30240.

This conclusion is addressed in *TCA's Response to CCC Report* (page 10) through an excerpt from the letter TCA consultant Dr. Dennis Murphy submitted to the Commission which states:

> *For the least Bell's vireo, the toll road Environmental Impact Report/Subsequent Environmental Impact Statement (EIR/SEIS) recognizes disturbance or permanent loss of portions of just two vireo "breeding" territories in the coastal zone- is a trivial impact on a species that is distributed along riparian strands throughout the San Mateo and San Onofre Creek watersheds, as well several dozen additional watersheds across southern California.*

As Dr. Murphy readily admits and the preceding discussion establishes, the presence of this species and its vital habitat within the area that would be disturbed or permanently lost is undeniable. As noted above and defined in Section 30107.5, this habitat area is therefore clearly ESHA and is afforded the protection provided by Section 30240 of the Coastal Act.

Southern California Coast Steelhead
The steelhead is a sea-run species of rainbow trout with an average length of 20 to 30 inches. A mature steelhead weighs approximately 8 to 9 pounds but can reach as much as 36 pounds. The body of the steelhead is somewhat compressed with a rounded snout and a large mouth. The spawning male experiences minor changes to its head, mouth and color. Typically, steelhead migrate to marine waters after spending one to four years in freshwater and spawn between December and June in southern California when seasonal streams have adequate flow volumes. Unlike some salmon species, steelhead do not

perish after spawning and typically attempt to return to the ocean. Historically, steelhead have been found from Alaska to Baja California.

The National Marine Fisheries Service determined the southern California coast steelhead (*Oncorhynchus mykiss*) to comprise a unique Evolutionarily Significant Unit of steelhead based on the fact that this population of steelhead is: 1) substantially reproductively isolated from other conspecific (same species) population units, and 2) represents an important component of the evolutionary legacy of the species. The range of the southern California coast steelhead Evolutionarily Significant Unit (henceforth referred to as the southern steelhead or steelhead) begins at the Santa Maria River north of Point Conception and continues south to the California/Mexico border. The anadromous[20] portion of the southern steelhead population is currently listed as endangered under the federal Endangered Species Act due to a decline from a historic population of over 55,000 individuals to the current population of approximately 500 individuals.

The anadromous portion of the southern steelhead population was listed by the California Department of Fish and Game as a species of special concern in 1995 and federally listed as an endangered species by the National Marine Fisheries Service in 1997. In the March 2007 technical report titled, *Viability Criteria for Steelhead of the South-Central and Southern California Coast*, the National Marine Fisheries Service explains the relationship between anadromous and non-anadromous steelhead populations:

> *We believe that juvenile steelhead in our area co-occur with their non-anadromous conspecifics (rainbow trout). Elsewhere, steelhead have been observed to have trout among their progeny, and vice versa (Zimmerman and Reeves 2000). Unfortunately, we do not know how often these transitions occur in south-central or southern California, nor what factors bring them about, though clearly individual populations can be polymorphic for life-history type. Depending on the rate of transition, a group of resident and anadromous fish may function as a single population; two completely distinct populations; or something in between.*

At the time of listing, southern steelhead had been thought to be extirpated from all of its historic range in southern California south of Malibu Creek. In 1999, however, juvenile southern steelhead were observed in San Mateo Creek, which prompted the National Marine Fisheries Service to extend the southern-most border of the southern steelhead range from its previous location at Malibu Creek to the California/Mexico border. This range extension was finalized in 2002. As noted in the May 1, 2002 *Range Extension for Endangered Steelhead in Southern California*:

[20] Anadromous fishes are those that spend all or part of their adult life in salt water and return to freshwater streams and rivers to spawn.

> *In 1999 and 2000, new information became available which indicated that the anadromous life form of O. mykiss (i.e. steelhead) or their progeny occurred in at least two coastal streams south of Malibu Creek (Topanga Creek and San Mateo Creek). This new information included observations of juvenile O. mykiss in Topanga Creek by a NMFS biologist and field and laboratory investigations conducted by the California Department of Fish and Game (CDFG) which demonstrated the presence and spawning of anadromous O. mykiss in San Mateo Creek (DFG, 2000). Based on this new information, NMFS published a Federal Register notice in December 2000 proposing to formally recognize that anadromous O. mykiss (or steelhead) ranged further southward in Southern California than was previously believed to be the case by extending the range of the listed population to San Mateo Creek (65 FR 79328).*
>
> …
>
> *Since the range extension was proposed in December 2000, NMFS has obtained some additional new information on O. mykiss in San Mateo Creek which was considered in this final determination. Additional microsatellite and mitochondrial DNA (mtDNA) analyses were conducted by Jennifer Nielsen (U.S. Geological Service, Alaska Science Center in Anchorage, AK.) on tissue samples taken from 16 O. mykiss collected in San Mateo Creek in 1999 and 2000 (Nielson and Sage, 2002). All 16 fish that were analyzed shared the MYS5 haplotype that is found throughout the range of O. mykiss in California, but which is most commonly found in Southern California populations (Nielsen et al. 1994). This finding is consistent with previous genetic analysis reported for O. mykiss in San Mateo Creek (DFG, 2000) and cited in NMFS' proposed range extension (65 FR 79328). According to Nielsen and Sage (2002), this haplotype has not been found in their previous survey of hatchery O. mykiss strains in California, and, therefore, suggests an endemic population structure in San Mateo Creek. Secondly, the DFG has undertaken periodic field surveys in upper San Mateo Creek and Devil's Canyon since May 2000 which have documented the continued presence of O. mykiss in the watershed. In many instances, these surveys were carried out in conjunction with efforts to remove exotic species that might prey upon or compete with O. mykiss. Although these surveys were limited in scope and methodology, they documented the presence of O. mykiss through at least August 2001 in Devil's Canyon. Summaries of the DFG field surveys for O. mykiss and exotic species removal are contained in a series of file memoranda prepared by DFG staff.* [emphasis added]

Overall, as described by TCA in the document titled, *Focused Summary of Environmental Impacts in the Coastal Zone*, California Department of Fish and Game biologists observed 78 southern steelhead in San Mateo Creek between March and September of 1999. While TCA notes that the majority of these observations occurred in the upper reaches of San Mateo Creek, approximately 9.5 miles from the coast, the

anadromous nature of southern steelhead suggests that the passage of these fish into the lower reaches of San Mateo Creek is a possibility. However, as noted by David Woelfel in his 1991 master's thesis, *The Restoration of San Mateo Creek: A Feasibility Study for a Southern California Steelhead Fishery*, although it once boasted a viable fishery and consistent spawning runs, San Mateo Creek has changed considerably since earlier times:

> *There are several factors that have contributed to the changes in the physical and biological characteristics of San Mateo Creek over the past 50 years. Dewatering of the aquifer in the lower creek valley has reduced stream flow which has eliminated or disrupted steelhead migrations and killed off significant amounts of bank-stabilizing riparian vegetation. Increased erosion has widened and created a braided channel. Exotic fish have eliminated the residual steelhead population in the upper reaches of the creek. Construction on sand and gravel operations and dikes in the creek channel has restricted the creek's flow. An extremely dry period from 1945 to 1950 was the first part of a longer dry cycle of rainfall which continued to 1976. The below average rainfall in several years after 1976 has not allowed the creek to overcome the altered conditions and create sufficient streamflow to enable a steelhead migration.*

Although the return of steelhead to San Mateo Creek suggests that the situation described above may have improved in the years since 1991, the lower San Mateo Creek continues to provide only sporadic winter flows and dry conditions have returned to the area in recent years. Despite the variable and seasonally suitable habitat provided to steelhead in the lower reaches of San Mateo Creek, there is evidence to suggest that the San Mateo Lagoon, which stretches from the I-5 overcrossing within the project area to Trestles Beach, may provide higher quality and more reliably suitable habitat for the southern steelhead. Coastal lagoons were specifically evaluated in the March 2007 technical report titled, *Viability Criteria for Steelhead of the South-Central and Southern California Coast*, by the National Marine Fisheries Service:

> *In the study area, the estuaries at the mouths of rivers and creeks are typically transformed into lagoons during the dry season, when the combination of low streamflow and coastal wave action allows a sandbar barrier to form between the ocean and the stream's mouth. Several case studies from outside the study area indicate that seasonal lagoons often comprise exceptionally good rearing habitat for juvenile steelhead.*

Additionally, the 2006 National Marine Fisheries Service report titled, *Steelhead Population Characterization of the South-Central/Southern California Steelhead Recovery Domain* notes that "lagoon-anadromous" steelhead (i.e. those fish that move between the ocean and coastal lagoons) comprise an established and highly robust life-history class:

> *Bond (2006), working at a study site in northern Santa Cruz County, has recently shown that each summer a fraction of juvenile steelhead over-summered in the estuary of their natal creek. Like elsewhere in California, this estuary was cut off from the ocean during the summer by the formation of a sandbar spit, and thus is more properly referred to as a seasonal lagoon. Bond (2006) showed unequivocally that juvenile steelhead do very well if they over-summer in the lagoon – many grow fast enough to migrate to the ocean their first year, and most enter the ocean at a larger size than fish coming from the freshwater portion of the stream system. Large size enhances survival in the ocean, and thus the lagoon-reared fish tend to be disproportionally represented in the adult spawning population (Bond 2006).*

Although this research was conducted in central California, the potential exists for a similar situation to occur within the San Mateo Creek and lagoon.

Critical habitat was initially designated for the southern steelhead by the National Marine Fisheries Service in 2000 but because the southern range boundary had yet to be extended, no streams or rivers south of Malibu Creek were considered or designated as critical habitat. Due to legal challenge, designated critical habitat for southern steelhead was removed in 2002 and re-established in 2005. Although recognized as occupied southern steelhead habitat, San Mateo Creek was again excluded from critical habitat designation, this time as a result of the National Defense Authorization Act for Fiscal Year 2004. This Act amended the Endangered Species Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(I) of the Endangered Species Act (16 U.S.C. 1533(a)(3)(B)(I)) now provides:

> *The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.*

As described in the September 2, 2005, *Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California*, at the time of review, MCB Camp Pendleton had developed and initiated a final Integrated Natural Resource Management Plan that recognized the presence of southern steelhead within San Mateo Creek and contained measures that provided benefits to the ESA-listed species. Examples of the types of benefits included actions to control erosion, protect riparian zones, minimize stormwater and construction impacts, reduce contaminants, and monitor listed species and their habitats. In addition, the December 10, 2004, *Proposed Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California,* noted that in correspondence between the U.S. Marine Corps and the National Marine Fisheries Service, the military agency "cited their

ongoing and positive consultation history with NMFS and underscored cases where they are implementing best management practices to reduce impacts on listed salmonids" before concluding that "critical habitat designation at [MCB Camp Pendleton] would likely impact national security by diminishing military readiness." Therefore, as stated in the proposed designation document, despite the fact that approximately 6-7 miles was found to be accessible to anadromous southern steelhead in the mainstem and tributaries of San Mateo Creek and that in assessing the conservation values of these areas of habitat in Camp Pendleton, the Critical Habitat Analytical Review Team "concluded that all of them were of high conservation value to the [southern steelhead]," the National Marine Fisheries Service determined "that the benefits of exclusion outweigh[ed] the benefits of designation, and [did not propose] to designate these DoD sites as critical habitat."

Although San Mateo Creek has been excluded from critical habitat designation due to national security reasons, the proposed and final designation documents clearly establish the presence of southern steelhead in San Mateo Creek within the last several years and provide an indication of the importance of this habitat area to the conservation and existence of the species. As described above, recent research also suggests that the San Mateo Creek lagoon may also play a potentially vital role in the continued viability of this population.

Overall, as the National Marine Fisheries Service notes in a 2004 letter to TCA:

> *…given the low numbers of steelhead in southern California and the small number of Orange County streams open to the ocean which contain O. mykiss and satisfactory trout habitat, San Mateo Creek… may be essential to the survival and recovery of steelhead in the southern portion of the southern California [Ecologically Significant Unit's] range.*

Indeed, the San Mateo Creek and lagoon is a unique and vital coastal habitat resource for the southern steelhead because it represents not only the southern-most occupied creek system for the southern steelhead Ecologically Significant Unit but also the southern most occupied creek system for the entire steelhead species. By providing habitat for those steelhead individuals that exist at the far southern edge of the species' habitable range, San Mateo Creek may provide an important refuge for members of this species that are more suitably adapted to both warmer oceanic and riverine water temperatures. Considering the potential for climate change induced sea surface temperature rise and northward shifting of marine habitat zones, preservation of southern steelhead populations that may demonstrate specific adaptations and genetic traits that have enabled them to exist within the warmest portion of occupied habitat may be vital for the continued existence of the species as a whole.

The importance of sea surface temperatures as a selective pressure and habitat constraint is well supported in the scientific literature. For example, the National Marine Fisheries Service Technical Report titled, *Viability Criteria for Steelhead of the South-Central and*

Southern California Coast, determined that "Variation in ocean conditions is known to have dramatic impacts on marine survival of Pacific salmonids" and that among these ocean conditions "Sea-surface temperature was the strongest predictor of ocean survival, and the correlations were strongest at times of early ocean survival (Mueter et al. 2002)." Therefore, by providing habitat for steelhead that may be better suited to warm water conditions, the San Mateo Creek may provide essential genetic material to the rest of the species.

For the reasons described above, the Commission ecologist has determined that those portions of the San Mateo Creek and associated lagoon located within the coastal zone portion of the project area meet the Coastal Act definition of ESHA. These areas are contiguous with areas previously determined to be ESHA due to their importance for the tidewater goby, arroyo toad and least Bell's vireo (as described above) and are estimated to comprise between 19 and 24 acres within the proposed project's disturbance limits.

Potential Effects on ESHA and Southern Steelhead
Proposed activities within and directly adjacent to the San Mateo Creek portion of the project's disturbance limits within the coastal zone include the construction of an access road along San Mateo Creek and under the north- and south-bound toll road connectors and the existing I-5 freeway, the construction of two several hundred foot long retaining walls to facilitate the placement of this access road, the placement of several thousand feet of the elevated, multi-lane toll road connectors, the use of a pile driver to anchor support structures for the elevated connectors, the extension and support of existing bridges along I-5 and the associated placement, positioning, removal and use of heavy machinery including graders, earthmovers, pile drivers, cement pourers, cranes, and material transport trucks. These activities are anticipated to be carried out over approximately three years and have the potential to adversely affect occupied and potentially occupied southern steelhead habitat in a variety of ways.

Although much of the proposed toll road would be elevated above the ESHA within and surrounding San Mateo Creek, TCA has estimated that the pilings and support structures would occupy at least 0.16 acre of the creek. In addition to the obvious detrimental affects associated with this proposed placement of permanent structures within the creek and the potential corresponding loss of current and future steelhead habitat, the proposed activities also involve substantial amounts of soil disturbance and earth moving as well as the temporary occupation of riparian and adjacent upland areas for construction equipment, material and personnel staging. These activities have the potential to increase the amount of sediment entering the San Mateo Creek and its associated lagoon through the settlement of dust as well as potential increases in wind and waterborne erosion of sediments into the creek areas. Furthermore, the proposed project involves extensive use of construction equipment and heavy machinery that have the potential to release materials that could contaminate the air, water and sediment in and around the creek area

and thereby degrade water quality within the creek. The project EIS provides additional details regarding some of the potential threats to the southern steelhead associated with the proposed project by stating that:

> *Although during most years the likelihood of impacts on southern steelhead would be low, the possibility still exists for the future presence of this species in the project area, especially during years with higher rainfall totals. Potential impacts to southern steelhead may occur from construction activities along or across streams, creeks, or any drainage. Direct impacts to southern steelhead during spawning runs from construction include disruption in breeding activities or removal of individuals. Physical activities in stream courses could cause additional mortality of adults or dispersing juveniles through impacts to the physical characteristics (substrate materials and creation of impediments to upstream movements) of the stream, which could occur during construction of the bridge/culvert structures.*

The project EIS also states that "long-term impacts to the tidewater goby and southern steelhead trout may occur as a result of road improvements along San Mateo and San Onofre Creeks" that would adversely affect the water quality of these riparian areas and therefore potentially degrade the quality of habitat and ESHA. The project EIS references the development of a Runoff Management Plan for the proposed project and describes the surface water quality benefits anticipated to be derived from the implementation of this plan. As discussed in Section E of this report (Water Quality), however, the proposed Runoff Management Plan contains many key uncertainties and may not be able to fully provide the level of anticipated water quality benefits described by TCA.

The proposed use of pile driving equipment to facilitate the placement of bridge and elevated toll road supports also has the potential to result in adverse impacts to the southern steelhead, if these fish are present in the project area during such activities. Pile driving and its unavoidable noise and vibration components, when conducted within or adjacent to water bodies, have been known to negatively affect fish and aquatic life.

In addition, the proposed placement of toll road and bridge support structures and falsework, construction equipment and machinery within the San Mateo Creek has the potential to degrade habitat, displace steelhead and impede upstream migration. These types of activities are specifically identified in the 2004 *Proposed Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California*, as representing a threat to the southern steelhead:

"The majority of the spawning and rearing habitat of the major river systems has been rendered inaccessible as a result of dams, debris basins, road crossings, and other in-stream structures which block or impede migration of adult steelhead to headwater

spawning and rearing tributaries, as well as restricted the emigration of juveniles to the ocean."

Mitigation
In addition to the development of the Runoff Management Plan described above and analyzed in Section E of this report (Water Quality), and the development of the Biological Resources Management Plan that was previously described, TCA has also proposed an additional mitigation measure to specifically offset or minimize the proposed project's potentially adverse affects on southern steelhead:

> *Measure TE-9. During final design, the TCA or other implementing agencies, as described in the [Runoff Management Plan], shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.*

While this measure may help ensure that upstream and downstream migration corridors remain open, thereby providing a benefit to the species, it does not proposed to address the additional adverse impacts to southern steelhead and steelhead occupied and potentially occupied ESHA described in the above section and therefore would not serve to mitigate the adverse effects to this species and ESHA anticipated to result from the proposed project.

Conclusion
The proposed project would require the temporary and permanent occupation and use of steelhead occupied and potentially occupied ESHA within the San Mateo Creek and lagoon to facilitate the construction and placement of the proposed toll road, associated support structures and military access road beneath I-5. The use of ESHA for these purposes is not dependant on ESHA resources and is therefore not an allowable use of ESHA (nor, as will be discussed in the wetlands section of this report, is the project an allowable use for wetland fill). Therefore the Commission finds that in addition to presenting a variety of threats to an important population of southern steelhead, the proposed project is inconsistent with the resources protection requirements contained in Section 30240 of the Coastal Act.

San Diego Fairy Shrimp
The San Diego fairy shrimp (*Branchinecta sandiegonensis*) is a small freshwater shrimp that inhabits vernal pools (seasonal shallow pools that are typically filled by winter and spring rains between November and May) in coastal southern California and south to northwestern Baja California. San Diego fairy shrimp (henceforth referred to as fairy shrimp) are habitat specialists found in small, shallow vernal pools and ephemeral

(lasting a short time) basins that range in depth from approximately 2 to 12 inches and are characterized by specific water chemistry and temperatures. All known occupied localities are below 2,300 feet and are within 40 miles of the Pacific Ocean.
Adult fairy shrimp range in size from 0.4 to 0.6 inches long and have large stalked eyes and 11 pairs of swimming legs. Little data is available for what fairy shrimp feed on, although algae, bacteria, protozoa, rotifers, and bits of organic matter are thought to be a large part of their diet.

Adult San Diego fairy shrimp are usually observed from January to March; however, in years with early or late rainfall, the hatching period may be extended. The species hatches and matures within 7 days to 2 weeks depending on water temperature. San Diego fairy shrimp disappear after about a month, but animals will continue to hatch if subsequent rains result in additional water or refilling of the vernal pools. The eggs are either dropped to the pool bottom or remain in the brood sac until the female dies and sinks. The "resting eggs," or "cysts," are capable of withstanding temperature extremes and prolonged drying. When the pools refill in the same or subsequent rainy seasons, some but not all of the eggs may hatch. Fairy shrimp egg banks in the soil may be composed of the eggs from several years of breeding. Studies have shown that vernal pools and ephemeral wetlands that support fairy shrimp, and occur in areas with variable weather conditions or filling periods (such as southern California), may hatch only a fraction of the total cyst bank (organisms in a resting stage) in any given year. Thus, reproductive success is spread over several seasons.

This species of fairy shrimp has been listed as endangered on the federal Endangered Species Act list since 1997 due to extensive loss and degradation of habitat from development and urbanization. At the time of listing, FWS estimated that only 200 of the original 500 acres of vernal pool habitats suitable for fairy shrimp occupation in San Diego remained. This decline in suitable habitat in San Diego, in addition to the near complete loss of once extensive vernal pool soils within the coastal plain of Los Angeles and Orange counties was a major factor in the listing status of this species. As required under the Endangered Species Act, final critical habitat was designated for the fairy shrimp in 2000. As demonstrated in Exhibit 15, critical habitat was designated for the fairy shrimp within the southern extent of the project area. This area includes a several dozen acre vernal pool complex on the coastal side of I-5 within the San Onofre Surfer Beach subunit of SOSB. Subsequent to the designation of critical habitat for the fairy shrimp, a lawsuit brought against the FWS by TCA and others challenged the designation due to inadequacies within the economic analysis portion of the document. As a result of this lawsuit, it was determined that FWS must re-designate critical habitat for the fairy shrimp. As stated in the April 3, 2007, *Reopening of Public Comment Periods for the Proposed Designations of Critical Habitat for the Coastal California Gnatcatcher and the San Diego Fairy Shrimp*, however, "Areas currently designated as critical habitat for the coastal California gnatcatcher and San Diego fairy shrimp will remain in place until such time as new final regulations for these species become effective." At this time,

because revised final critical habitat designations have yet to be developed and released by FWS, those habitats designated in 2000 remain in place.

As noted by TCA in the document titled, *Focused Summary of Environmental Impacts in the Coastal* Zone, fairy shrimp continue to be observed in designated critical habitat within the project area:

> *A total of 13 [vernal pool] basins occur within the coastal zone portion of the proposed project study area along the bluff overlooking Surf Beach in San Onofre State Beach. Surveys for fairy shrimp conducted in 2001 and 2003 identified San Diego fairy shrimp in 7 of these 13 basins. These occupied basins are located more than 500 ft from the proposed project. Therefore, the habitat containing this species will be avoided by the proposed project.*

Despite the distance between the proposed toll road and fairy shrimp occupied vernal pools, approximately 2.16 acres of fairy shrimp critical habitat are included within the project's disturbance limits.

Due to the rarity, sensitivity and importance of vernal pool soils as well as the fact that these areas support sensitive species, such as the fairy shrimp, the Commission staff ecologist has determined that the majority of fairy shrimp critical habitat within the coastal zone portion of the project area meets the Coastal Act definition of ESHA. However, an analysis of the fairy shrimp critical habitat within the proposed project area has revealed that the 2.16 acres that lie within the proposed construction footprint do not provide substantial habitat value to the fairy shrimp and should therefore not be considered as ESHA. The 2.16 acres in question are located on the coastal side of the I-5 freeway but are separated from fairy shrimp occupied and potentially occupied vernal pool habitat by the two lane paved frontage road that provides access to both the San Onofre Nuclear Generating Station and the San Onofre Surfer's Beach subunit of San Onofre State Beach. Considering both the distance between the proposed project construction area and the fairy shrimp vernal pools (estimated at 500 feet by TCA, as noted above) and the buffer provided by the presence of this paved frontage road, it is unlikely that the 2.16 acres of critical habitat directly adjacent to I-5 provides viable habitat for the fairy shrimp. Therefore, the Commission does not consider this area to be ESHA. Those areas that contain and immediately surround the occupied and potentially occupied vernal pools do, however, meet the coastal act definition of ESHA.

Potential Effects on ESHA and San Diego Fairy Shrimp
In the project EIS, TCA contends that the fairy shrimp would not be directly affected by the proposed project, due to the fact that there is no known evidence to suggest that fairy shrimp have occupied or could potentially occupy the habitat area within the constrcution limits:

> *Direct impacts to federally endangered fairy shrimp species from construction will be avoided because there will be no disturbances of any occupied vernal pool habitat. Indirect impacts include decreased water quality from erosion, runoff, siltation, and introduction of invasive species to vernal pools occupied by fairy shrimp. These indirect impacts have been reduced through implementation of [best management practices] implemented as part of the [Runoff Management Plan].*

The basis for this opinion appears to be the fact that fairy shrimp occupied vernal pools surveyed four to six years ago were approximately 500 feet from the proposed location project activities on the I-5 freeway. Although this distance would preclude direct effects such as the physical destruction of those fairy shrimp occupied vernal pools surveyed in 2001 and 2003, as noted above, this distance may not be sufficient to eliminate consideration of all potential project related indirect impacts to fairy shrimp occupied and potentially occupied critical habitat/ESHA, however.

Areas within the proposed project's disturbance limits may experience reductions in water quality due to increased erosion, sedimentation, and potential release of contaminated materials such as fuels, lubricants and oils. In addition, grading and the operation of heavy machinery within construction areas may alter the pattern of water runoff from these areas. Given the sensitivity of vernal pool organisms to water depth, temperature and chemical composition, any changes in the amount or composition of runoff coming from those critical habitat areas within the project's disturbance limits may lead to a degradation in the quality of vernal pool habitats and adversely influence their suitability for the fairy shrimp. While TCA has committed to implementing a Runoff Management Plan to reduce the potential for these effects to occur, as detailed in Section E of this report (Water Quality), this plan is incomplete.

Proposed soil disturbance and grading may also alter the vegetation communities within and surrounding the fairy shrimp critical habitat areas by increasing the number and variety of introduced or invasive plant species. Although TCA has committed to restoring the project area post-construction, the construction phase of the proposed project is substantially prolonged and the re-vegetation process would also require time to be completed. During this period, invasive species may propagate and spread in and around the project area (including the fairy shrimp critical habitat area) and alter the amount of runoff, shade, soil nutrients and native vegetation.

The deposition of dust and airborne pollution may also adversely affect the quality and suitability of fairy shrimp critical habitat. Although the magnitude and extent of these impacts on fairy shrimp and their habitat have not investigated in detail by TCA, there is a reasonable potential for adverse pollution-related effects.

Mitigation
Because TCA has not recognized any potential direct adverse effects to the fairy shrimp or its critical habitat area, specific mitigation measures for this species have not been proposed. Those general mitigation measures that may minimize the magnitude and extent of adverse effect described above are included below as General Mitigation Measures. Applicable measures include the implementation of a Runoff Management Plan and use of Best Management Practices to avoid the release of contaminated materials, reduce erosion and sedimentation and avoid sensitive areas. While questions remain regaring the adequacy of these measures to completely mitigate direct and indirect project related impacts, the combination of the distance between fairy shrimp occupied and potentially occupied ESHA and the project construction footprint, the presence of the frontage road and its ability to act as a buffer to contaminated or sediment laden runoff or erosion and the implementation of the general mitigation measures noted above, would substantially reduce the liklihood of adverse project related effects affecting the fairy shrimp of fairy shrimp occupied ESHA.

Conclusion
As described above, although the proposed project would require the temporary and permanent occupation and use of approximately 2.16 acres of fairy shrimp critical habitat to facilitate the construction and placement of the proposed toll road, these 2.16 acres are not considered to be ESHA for the San Diego fairy shrimp. Therefore the Commission finds that the proposed project presents only a minor and insignificant threat to the fairy shrimp and fairy shrimp occupied or potentially occupied ESHA and is not inconsistent with the resources protection requirements of Section 30240 of the Coastal Act as it pertains to this species.

General Mitigation Measures
In addition to those specific impacts to the Pacific pocket mouse, tidewater goby, arroyo toad, coastal California gnatcatcher, least Bell's vireo, southern California coast steelhead trout and San Diego fairy shrimp and at least 50 total acres of ESHA, as detailed above and demonstrated in the revised Exhibit 15 (of the list of exhibits included with the first addendum to the original staff report), the proposed project would also potentially adversely affect additional species and habitat located within and adjacent to the 138 acres of the project footprint located within the coastal zone. As described in the project EIS, a wide variety of species have been observed to use the coastal zone portion of the project area including migratory and resident raptors, migratory songbirds, bats, native amphibians, reptiles, small mammals and insects. TCA has proposed a variety of mitigation measures to reduce impacts to these species and their habitats. Those measures highlighted by TCA in the *Focused Summary of Environmental Impacts in the Coastal Zone* as potentially applicable to threatened or endangered species and habitats are included below:

> *Measure WW-1. Prior to construction, the TCA or other implementing agency/agencies shall designate a Project Biologist responsible for overseeing biological monitoring,*

regulatory compliance, and restoration activities associated with construction of the selected alternative in accordance with the adopted mitigation measures and applicable law.

Measure WW-2. During final design of the project, the Project Biologist shall review the design plans and make recommendations for avoidance and minimization of sensitive biological resources. The TCA or other implementing agency/agencies Environmental and Engineering Staff shall determine the implementation of those recommendations.

Measure WW-3. A Biological Resources Management Plan (BRMP) shall be prepared prior to construction. The BRMP shall provide specific design and implementation features of the biological resources mitigation measures outlined in the resource agency approval documents. Issues during construction and operation to be addressed in the BRMP shall include, but are not limited to, resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements. The Draft BRMP shall be submitted to the USFWS, National Marine Fisheries Service (NMFS), CDFG, USACOE, RWQCB, FHWA, the California Coastal Commission, and Caltrans for review to the extent required by permit by such agencies.

The primary goal of the BRMP will be to ensure the long-term perpetuation of the existing diversity of habitats through restoration in the project area and adjacent urban interface zones and to prevent offsite or indirect effects. The BRMP shall contain at a minimum the following:
a. Identification of all Environmental Sensitive Areas (ESA). ESAs are defined as sensitive habitats including, but not limited to, areas subject to the jurisdiction of the CDFG, USACOE, and USFWS.
b. Design of protective fencing (i.e., t-bar or yellow rope) around ESAs and the construction staging areas.
c. Locations of trees to be protected as wildlife habitat (roosting sites).
d. For areas that will be restored, the quality of the adjacent habitat will be characterized.

This characterization shall include species composition, density, coverage, and presence of nonnatives. This characterization will provide a baseline to compare the success of the restoration. The site preparation plan for each restoration site will include:
• Sources of plant materials and methods of propagation.
• Site preparation (clearing, grading, weed eradication, soil amendment, topsoil storage), irrigation, planting (container plantings, seeding), and maintenance (weed control, irrigation system checks, replanting) of restoration areas. Specification of parameters for maintenance and monitoring of restoration areas, including weed control measures, frequency of field checks, and monitoring reports for temporary disturbance areas within the right-of-way.
• Remedial measures to be taken if performance standards are not met.
• Methods and requirements for monitoring of the restoration efforts.
• Specification of the purpose, type, frequency, and extent of chemical use for insect and disease control operations as part of vegetative maintenance within restoration areas.

e. Specific measures for the protection of sensitive habitats to be preserved in and adjacent to the rightof- way to ensure that construction does not increase beyond the impacts identified in the EIS/SEIR.

These measures will include, but are not limited to, erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements. Details of the erosion, siltation, and dust control mitigation measures will be provided in the Storm Water Pollution Prevention Plan (SWPPP).

Measure WW-4. In conjunction with the development of final plans and specifications for construction, or other activities involving vegetation/habitat removal, the Project Biologist shall review and approve the contractor's map of all sensitive habitats (Environmentally Sensitive Areas) within 152.4 meters (500 feet) of the grading limits on the grading plans. The ESA maps shall be prepared by the construction contractor's qualified biologist and approved by the TCA or other implementing agency/agencies. All ESAs to be avoided and performance standards established by the resource agencies shall be clearly noted on the grading, construction, and landscape plans. Additionally, the landscape plans shall indicate that plant materials be local southern Orange County natives.

Measure WW-5. During grading activities and construction operations, the Project Biologist shall conduct monitoring within and adjacent to sensitive habitats including monitoring of the installation of protective devices (silt fencing, sandbags, fencing, etc.), installation and/or removal of creek crossing fill, construction of access roads, vegetation removal, column installation, falsework installation and removal, and other associated construction activities, as deemed appropriate by the Project Biologist. Biological monitoring shall be conducted to document adherence to habitat avoidance and minimization measures addressed in the project mitigation measures and as listed in the USFWS, CDFG, and USACOE permits/agreements.

Measure WW-6. Final design and construction shall restore the perennial river and stream channels and ephemeral drainages and washes to their original contours upon completion of construction where feasible, with the exclusion of areas of permanent impact.

Measure WW-7. During all construction activities, the Contractor shall ensure that construction equipment or vehicles shall not be stored in areas defined as ESAs, including areas within the jurisdiction of the USACOE and/or CDFG. There shall be no fueling, lubrication, storage, or maintenance of construction equipment within 46 meters (150 feet) of CDFG or USACOE jurisdictional areas. Construction equipment staging/storage shall be located in previously disturbed or non-native areas to the maximum extent possible.

Measure WW-8. During all construction activities, the Contractor shall ensure that no waste material shall be discharged to any CDFG or USACOE jurisdictional areas. Spoil sites shall not be located within any CDFG or USACOE jurisdictional areas, or in areas where it could be washed into any surface water body.

Measure WW-9. Prior to final design, the Contractor shall prepare the final construction Runoff Management Plan (RMP). The plan shall address the final location of facilities to route and detain corridor runoff for the purpose of maintaining peak flows and flow velocities downstream of the Alignment at existing rates and preventing project pollutants from reaching improved and unimproved downstream drainages. County of Orange Best Management Practices (BMPs) will be included in these runoff facilities of the Alternatives as determined appropriate by the Design Engineer. The final RMP will contain provisions for changes to the plan (e.g., alternative mechanisms plant materials) if necessary during project design and/or construction phases to achieve the stated goals and performance standards at an equal or greater level. The RMP will address issues of detention and settlement basin design for mitigation requirements in relation to water quality. The plan shall be submitted to the Regional Water Quality Control Board (RWQCB), Caltrans, and the Orange County Environmental Management Agency (OCEMA) Environmental Planning Division for review and comment. (RMP, Psomas 2003.)

Measure WW 10. The Contractor shall locate staging areas for construction equipment outside of areas in the jurisdiction of the USACOE or CDFG to minimize impacts to sandy creek benches.

Measure WV-6. Prior to the commencement of grading activities or other activities involving vegetation/habitat removal, the Project Biologist shall attend preconstruction meetings with construction foremen, bridge engineers, and the TCA or other implementing agencies to confirm that all environmental conditions are discussed. Monthly, or on an as needed basis, new construction personnel shall complete an educational program. Issues to be covered will include, but are not limited to, environmental measures for avoiding impacts to sensitive biological resources, ESAs, waste disposal, vehicle transportation routes, seasonal restrictions, fueling/maintenance restrictions, and other relevant topics.

Conclusion

Despite the implementation of these mitigation measures, as well as those described for each endangered or threatened species listed above, the Commission concludes that the proposed project's permanent and/or temporary use of approximately 50 total acres of ESHA is not a use allowable within such habitat, and would not protect such habitat, and is therefore inconsistent with the requirements of Section 30240 of the Coastal Act.

TCA's Response to CCC Report (page 14) takes issue with this conclusion and the analysis included above by stating:

Perhaps most troubling is that the Staff Report reaches conclusions about project impacts without taking into account the extensive mitigation measures required by State and federal law that avoid, minimize, and compensate for impacts to biologically sensitive areas. As staff well knows, the project cannot be built without these measures. Because of this omission, the report mischaracterizes and vastly overestimates project impacts.

The Commission disagrees. The Commission's analysis takes into account each relevant mitigation measure proposed by TCA to address anticipated adverse impacts to sensitive species and habitats. Thus, the conclusions regarding the project's impacts were made subsequent to the review and analysis of these mitigation measures. It should be noted however, that despite TCA's effort to avoid and reduce project impacts, even after mitigation, a substantial number of the proposed project's impacts remained and substantial resource damage as a result of the proposed project would be inevitable and unavoidable. Furthermore, based on the availability of less environmentally damaging alternatives and the proposed project's unavoidable occupation, disturbance and destruction of over 50 acres of ESHA, the Commission has determined that mitigation designed to "compensate for impacts to biologically sensitive areas" would be insufficient to enable the proposed project to be found consistent with the Coastal Act.

B. <u>Wetlands.</u>
Section 30233 of the Coastal Act provides:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> > *(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
> >
> > *(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
> >
> > *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
> >
> > *(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
> >
> > *(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
> >
> > *(6) Restoration purposes.*
> >
> > *(7) Nature study, aquaculture, or similar resource dependent activities.*
>
> …
>
> *(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.*

The coastal zone wetland communities of San Mateo Creek are found within a large mosaic of uplands, riparian wetlands, and estuarine wetlands—a relatively rare situation in coastal Southern California. The San Mateo and San Onofre watersheds, through which the proposed toll road will cross, are estimated to have the highest level of natural watershed functions in the region. This is evidenced in part by the presence of multiple protected species, many of which have been unable to survive in more impacted and

fragmented wetlands found elsewhere.[21] The seven federally threatened or endangered species that depend on these wetlands for breeding, feeding, and shelter include: tidewater goby (*Eucyclogobius newberryi*), arroyo toad (*Bufo californicus*), southern California coast steelhead (*Onchorhynchus mykiss*), coastal California gnatcatcher (*Polioptila californica*), least Bell's vireo (*Vireo bellii pusillus*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and Riverside fairy shrimp (*Streptocephalus woottoni*). The habitats that support these endangered species qualify as environmentally sensitive habitat areas (ESHA) and are analyzed in the previous section of this report entitled Environmentally Sensitive Habitat Areas.

Section 30233(a) Analysis

According to TCA's consistency certification and subsequently submitted wetlands analysis, the proposed toll road would include the installation of new bridge supports in San Mateo Creek, new bridge bents in San Onofre Creek, and grading of wetlands in San Mateo Marsh. These impacts trigger the 3-part test under Section 30233(a) for projects involving wetland fill: (a) the allowable use test; (b) the alternatives test; and (c) the mitigation test. TCA estimates the wetland fill to consist of 0.16 acres of permanent impacts and 7.70 acres of temporary impacts to wetlands within the coastal zone. As will be discussed in the mitigation section below, TCA's wetland delineations are incomplete as neither soil samples were assessed nor hydrological information provided. Nevertheless, what TCA has submitted is sufficient to enable the Commission to determine the project's consistency with the first two tests of Section 30233(a), since the project clearly results in wetland fill (and a completed delineation would only maintain or increase the wetland acreage).

a) Allowable Use Test

Under the first of these tests, a project must qualify as one of the seven stated uses allowed under Section 30233(a). TCA maintains that the project is an allowable use under Section 30233(a)(4), which authorizes wetland fill for "*Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines*."

TCA's position is that the proposed toll road is an incidental public service because it fits within the historically accepted interpretation of the term. TCA cites the North County Transit District's double tracking project on Camp Pendleton as an example. TCA states:[22]

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[21] Michael D. White, Senior Ecologist, Conservation Biology Institute, *Impacts of the Foothill Transportation Corridor-South (FTC-S) on Wetland Resources in the Coastal Zone*, Letter to Dan Silver, Endangered Habitats League, September 13, 2007.

[22] Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 at 47.

> *The Coastal Commission has considered expansions of existing roads, an airport runway (City of Santa Barbara, CC-058-02) and several past North County Transit District (NCTD) double tracking rail projects just east of I-5 on Camp Pendleton (including CC-55-05, CC-52-05, and CC-86-03) in certain situations to qualify as "incidental public service purposes," and thus allowable under Section 30233(a)(5) where no other alternative existed and where the expansion was deemed necessary to maintain existing traffic capacity.*

The Commission initially found North County Transit District's double tracking proposals were incidental public services because they were necessary to maintain existing passenger service levels. However, upon realizing North County Transit District's overall approach, in the subsequent two double tracking proposals (CC-004-05 and CC-008-07), the Commission found:

> *In finding those projects [CC-086-03 and CC-052-05] "limited expansions" and "necessary to maintain existing capacity," and thus an allowable use as an incidental public service under Section 30233(a)(5), the Commission reserved the concern over future double tracking proposals, stating that they would not necessarily continue to qualify under this section, because at some point with increasing numbers of double tracking proposals, the double tracking: (a) will no longer be limited; and (b) will contain enough length of a second set of tracks to in fact constitute an increase in capacity. However, at that time and in those locations the Commission found that the double tracking projects did not meet either of these thresholds that would render the projects ineligible for consideration as an incidental public service.*
>
> *The piecemeal nature of NCTD's submittals has faced the Commission with a continuum of improvements, rather than a single unified project, which has made the determination of when increases in capacity are triggered a difficult one. To assist in this determination the Commission staff has requested information both about future double tracking proposals NCTD (or other proponents) are considering or planning for, and about documenting the public access benefits of improving public transit. On the first request, NCTD states future double-tracking proposals on Camp Pendleton would likely only be part of more comprehensive transportation improvement programs such as Los Angeles-San Diego Rail Corridor Agency (LOSSAN) and/or California High Speed Rail Authority projects. NCTD states:*
>
>> *Currently, no additional future double-track projects have been identified by NCTD to be constructed within the Camp Pendleton area. It should be noted, however, that NCTD performs railroad maintenance-of-way activities on a continuous basis, is required to respond promptly to emergency situations as they may occur along the railroad right-of-way, and is mindful of pursuing potential opportunities that may improve railroad operations. As such, it is possible that double-tracking projects*

> *may arise in the future as individual projects or as part of comprehensive transportation improvement programs, such as LOSSAN and/or the California High Speed Rail Authority.*

> *On the second request for individual and cumulative benefits, NCTD has provided the detailed discussion . . . which establish that the project will benefit public access. This discussion, combined with the programmatic operational discussion contained in the Fish and Wildlife Service's Biological Opinion . . . make it clear that the numbers and speeds of trains are going to increase, if not individually from this project, then certainly cumulatively based on currently planned improvements, leading the Commission to conclude that the project is likely to increase capacity. If it increases capacity, it does not qualify as an allowable use under Section 30233(a) as an incidental public service, and none of the other eight allowable uses in Section 30233 apply. Therefore, as discussed in the previous section of this report (Section B, and with elaboration in Section F), the only way the Commission could find the project consistent with the Coastal Act would be through the "conflict resolution" provision (Section 30007.5).*

The Santa Barbara Airport Case cited by TCA is not relevant because the Commission found the runway extension did not increase capacity and could be considered an incidental public service. Moreover, the Commission has never considered a new road an incidental public service. The Commission considered the possibility of a new road replacing an existing road with identical capacity in the Caltrans Devil's Slide Tunnel case (CC-094-00) and determined that this could not meet the test of being an incidental public service. The Commission found:

> *Thus, fill for the expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" only if: (1) the expansion is limited; and (2) the expansion is necessary to maintain* ***existing*** *traffic capacity. The proposed project, a 2-lane tunnel replacing a failing 2-lane existing highway, qualifies as a project designed to maintain existing traffic capacity. However, it is less clear whether the project qualifies as a limited expansion of an existing road. The Commission has generally used this definition for activities maintaining an existing road along its same alignment. Since the proposed tunnel essentially constitutes a new alignment, it therefore may not qualify as an expansion of an existing road. Furthermore, in approving the "Measure T" LCP amendment, the Commission has already determined that the proposed roadway fill is neither an incidental public service, nor an allowable use. The Commission therefore concludes at this time that the project does not constitute an allowable use under Section 30233(a).*

Thus, the Commission strongly disagrees with TCA's assertion that the proposed toll road is necessary to maintain existing traffic capacity. An additional highway will increase capacity by its very definition. TCA undermines its own argument when it

asserts later in its consistency certification that the proposed toll road will improve public access to the coast for inland visitors. Finally, as noted in the Devil's Slide case, the Commission's historic interpretation of the scope of incidental public services has been that expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" only if: (1) the expansion is limited; and (2) the expansion is necessary to maintain existing traffic capacity. This historic interpretation was supported in the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, and the court found that:

> *… we accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*

With respect to a Coastal Act policy interpretation raised in *TCA's Response to CCC Report*, p. 47 (footnote 15), TCA maintains that the Commission's application of Sections 30233 and 30340 of the Coastal Act, is discretionary, and if the Commission were to apply them, section 30512.2(b) of the Coastal Act (and of the CCMP) requires the Commission to do so only to the extent necessary to achieve compliance with one or more of the legislative goals set forth in Section 30001.5 of the Coastal Act. The Commission disagrees. Under the Coastal Act, and thus the CCMP, Section 30512.2 by its express terms applies only to Commission reviews of Local Coastal Programs, and not to the application of Chapter 3 policies generally (including federal consistency reviews).

The Commission concludes: (a) that the project is not a temporary disruption; (b) that the project is not a limited expansion of an existing road; (c) that the project will increase highway capacity; and, therefore, (d) that it cannot be considered an allowable use under Section 30233(a)(4).

b) Alternatives Test

The second test of Section 30233(a) is that the project needs to be the least environmentally damaging feasible alternative. In support of its consistency certification, TCA has submitted several documents discussing alternatives, including: Alternatives Analysis Summary for FTC-S (Feb. 2007) An Evaluation of Alternative Designs for FTC-S Connectors; Memo "Transit Opportunities"; and Information on the Citizen's Beltway Concept.

Most of this information is included in TCA's SEIR Response to Comments general discussion of alternatives; the rest is in response to specific Commission staff questions about whether wetland fill at San Mateo Creek could be avoided by spanning the creek, and about whether the "Citizen's Beltway Concept" alternative had been seriously considered.

Concerning the general discussion of alternatives, TCA notes that planning efforts have been continuing over the past 20 years for the Foothill Transportation Corridor. Published planning documents go as far back as 1981 when the County certified an EIR that included a conceptual alignment for a transportation corridor facility on the County Master Plan of Arterial Highways (MPAH). From 1989 to 1991, TCA published documents showing two basic alignments, one through San Clemente and one on Camp Pendleton. These were referred to as the "C" (Camp Pendleton) and "BX" (San Clemente) alignments, and included a number of sub-alignments as variations on the basic alignment, with "C" turning into a refined "CP" alignment (not to be confused with the CC alignment – the CC alignment stands for Central Corridor and is a variation on the BX alignment, not the C or CP alignments). In December 1993, the TCA initiated the preparation of a Subsequent EIR to evaluate the CP Alignment, the BX Alignment and the No Build Alternative.

TCA was subsequently mandated to participate in a "NEPA/Section 404 MOU" process. Under this process, from August 1999 to November 2000, the NEPA/Section 404 MOU signatory agencies and the TCA developed the alternatives to be evaluated in the Draft EIS/SEIR. The MOU signatory agencies are: U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Federal Highway Administration, Caltrans, as well as the U.S. Marine Corps and TCA, and are collectively referred to as the "SOCTIIP Collaborative."

By November 2000, the SOCTIIP Collaborative had concurred on a list of 24 Alternatives to be evaluated in the technical studies supporting the Draft EIS/SEIR. These alternatives include 19 toll road Alternatives, 3 non-toll Road Alternatives and 2 no action Alternatives. This list was subsequently reduced to eight build alternatives and 2 no action alternatives, presented in the Draft EIR and depicted on Exhibits 3-4. Essentially this list can be characterized, in terms of "build" alternatives, as consisting of:

(a) three toll road alternatives that converge to one in the San Mateo Creek watershed (i.e., the three FEC (Far East Corridor) alternatives, one of which (A7C-FEC-M) is the proposed toll road);

(b) one full toll road in San Clemente (i.e., the CC (Central Corridor));

(c) one toll road not fully connecting with I-5 (i.e., the CC-ALPV (Central Corridor, Avenida La Pata);

(d) improvement of existing arterials in San Clemente (i.e., AIO (Arterial Improvements Only)); and

(e) I-5 widening.

TCA states that during Phase II of the Collaborative effort, January 2001 to November 2005, further refinements were considered to reduce environmental effects. Comparable refinements to seek to reduce socioeconomic effects were not undertaken; TCA states (EIS/SEIR, p. ES-6):

> *During that time the FHWA/TCA realized that the socioeconomic impacts of the Alternatives that connected to the I-5 at Pico Avenue could not be appreciably avoided by specifically refining those Alternatives. Development in the City of San Clemente had increased substantially, especially in the undeveloped areas where the Foothill- South Corridor Alignments were proposed.*

The environmental refinements for the proposed alignment included: (a) significantly reduced wetland acreages (for Corps defined wetlands, from an initial 17 acres to less than one acre); (b) coastal sage scrub impact reductions from 538 acres to 385 acres; (c) riparian ecosystems reductions from 160 to 43 acres; and (d) moving the alignment to avoid areas where surveys had documented Pacific pocket mice. Overall, TCA states "The total disturbance limits for the Preferred Alternative have been reduced approximately 30 percent resulting in significantly less impact to the natural environment."

TCA further states that, through the effort of the SOCTIIP Collaborative, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency have "recently issued their preliminary agreement that the Preferred Alternative is the least environmentally damaging practicable alternative." TCA also states that "the U.S. Fish and Wildlife Service has preliminarily determined that the Preferred Alternative complies with the requirements of the Endangered Species Act."

In pages ES-9 to ES-2-19 of the EIS/SEIR (Exhibit 25) TCA summarizes the Collaborative's alternatives considerations. The analysis began with a "a multi-dimensional evaluation of the alternatives in order to identify a Least Environmentally Damaging Practicable Alternative (LEDPA)." This included developing:

> *... a comprehensive matrix to assist in evaluating the alternatives using several parameters including: traffic conditions, air quality, aquatic resources (including compliance with Section 404 of the Clean Water Act/CDFG Streambed Alteration Program), water quality, endangered species impacts (including compliance with Section 7 of the ESA), socioeconomic impacts, land use impacts, military impacts on MCB Camp Pendleton, earth resources, cultural and historic resources, recreational resources, and project costs.*

The matrix was then looked at in the context of regional habitat planning programs (NCCP, SAMP), due to the importance of those programs for regional open space and habitat protection. The Collaborative then attempted to define what would be a "practicable" alternative, based on U.S. Army Corps of Engineers and EPA guidance documents (Section 404(b)(1) Guidelines). The Collaborative considered "practicable" to mean "as one that is

available[23] and capable of being done[24] after taking into consideration: (1) cost[25]; (2) existing technology; and (3) logistics in light of the overall project purposes." The Collaborative considered an alternative not to be practicable if:

> *a. It does not meet the project purpose and need;*
> *b. Cost of construction (including mitigation) is excessive;*
> *c. There are severe operational or safety problems;*
> *d. There are unacceptable adverse, social, economic, or environmental impacts;*
> *e. There would be serious community disruption;*
> *f. There are unsuitable demographics (for transit Alternatives); and*
> *g. There are logistical or technical constraints.*

Applying these criteria, the Collaborative determined:

> *The Collaborative applied the seven criteria listed to the eight SOCTIIP Alternatives. Based on that evaluation, the following SOCTIIP Alternatives were determined to be not practicable: Central Corridor (CC) (yellow); Central Corridor-Avenida La Pata (CC-ALPV) (light orange); Alignment 7 Corridor-Avenida La Pata (A7C-ALPV) (dark orange); Arterial Improvements Only (AIO) (blue); the I-5 Widening Alternative (I-5) (red); and the No Action Alternatives.*
>
> *The reasons for the determinations are as follows:*
>
> *Criterion 1: It does not meet the project purpose and need*
> *• No Action Alternatives*
>
> *Criterion 2: Cost of construction (including mitigation) is excessive*
> *• CC Alternative*
> *• I-5 Widening Alternative*
> *• A7C-ALPV Alternative*
> *• AIO Alternative*
>
> *Criterion 3: There are severe operational or safety problems*
> *• CC Alternative*
>
> *Criterion 4: There are unacceptable adverse, social, economic, or environmental impacts*

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[23] "Available" means obtainable for meeting the project purposes. Available site may include property already owned by a permit applicant, as well as properties that could be obtained, utilized, expanded, or managed.
[24] "Capable of being done" means that it is possible to achieve the basic purpose on a given site, after consideration of cost, existing technology, and logistics.
[25] If an Alternative is unreasonably expensive to the applicant, the Alternative is not practicable.

• CC Alternative (aquatic resources, built environment and social and economic impacts)
• CC-ALPV Alternative (aquatic resources, built environment and social and economic impacts)
• A7C-ALPV Alternative (built environment, social and economic impacts)
• AIO Alternative (built environment, social and economic impacts)
• I-5 Widening Alternative (built environment, social and economic impacts)

Criterion 5: There would be serious community disruption
• CC Alternative
• CC-ALPV Alternative
• A7C-ALPV Alternative
• AIO Alternative
• I-5 Widening Alternative

Criterion 6: There are unsuitable demographics
• None. (This criterion applies to mass transit Alternatives, not highway Alternatives)

Criterion 7: There are logistical and technical constraints
• AIO Alternative
• I-5 Widening Alternative

This left only the three FEC/San Mateo Creek watershed alternatives in contention, as at this point the Collaborative had essentially agreed that: (1) the no project alternative is not practicable because it does not meet the project need; (2) the AIO and I-5 alternatives are not practicable because they lack funding sources; (3) the CC, CC-ALPV, and A7C-ALPV alternatives are not practicable because they would result in "severe community disruption."

With design refinements including bridges and wildlife crossings, the Collaborative determined that of these three, the proposed (A7C-FEC-M) alternative would have the least effect on habitat fragmentation and would preserve larger blocks of open space and preferable habitat linkages. These three eastern alternatives all converge in southern Orange County and become the same alignment in the San Diego County/SOSB/San Mateo Creek watershed.

The Collaborative also compared the alternatives by comparing wetland impacts and by compiling a matrix of environmental issues. TCA states:

Evaluation Criteria and Screening Process

Summary of Jurisdictional Delineation Evaluation. A Jurisdictional Determination and Wetlands

Delineation Technical Assessment was prepared for six of the project Alternatives in August 2004 and revised in April 2005 by Glenn Lukos Associates, Inc. (GLA). The

report is Attachment 12 of the Response to Comments document. The Wetlands Delineation Technical Report describes the location and extent of aquatic features located within the disturbance limits of six of the corridor alternatives considered in the EIS/SEIR. The impacts of the six corridor alternatives are compared in Table 3 below.

Table 3
Summary of Permanent Impacts to Corps Jurisdiction (Acres)

Alternative	Corps		
	Total	Non-Wetland	Wetland
Preferred Alternative (A7C-FEC-M – Initial)	6.27	5.45	0.82
A7C-FEC-M Ultimate	6.90	5.97	0.93
CC – Initial	14.87	1.47	13.40
CC - Ultimate	15.08	1.51	13.57
CC-ALPV - Initial	12.38	0.97	11.41
CC-ALPV - Ultimate	13.39	1.01	12.38
A7C-ALPV - Initial	2.52	1.96	0.56
A7C-ALPV - Ultimate	3.34	1.98	1.36
FEC-W - Initial	6.69	4.07	2.62
FEC-W - Ultimate	6.96	4.32	2.64
FEC-M - Initial	5.44	3.73	1.71
FEC-M - Ultimate	6.02	4.04	1.99

Source: Glen Lukos 2004

Based on the Collaborative's overall environmental impacts matrix TCA states (FEIS-SEIR, p. ES-16):

Review of the results indicate that of the eight categories evaluated (Criteria 1, 2, 3a, 3b, 3c, 4a, 4b and 4c), the Preferred Alternative is ranked best in four categories (3a, 3b, 3c and 4a), second in two categories (2 and 4b), fourth in one category (1) and fifth in one category (4c). Being ranked at the top in four categories is the best for any of the alternatives evaluated. The normalized rank score for each of the integrity indices evaluated in the functional assessment for each the six corridor alternatives is provided in Table 4 below.

Table 4
Normalized Rank Scores for all Criteria and Corridor Alternatives for the Initial Corridor Footprints

Corridor Alternatives (Initial)	Criteria 1: Miles of Stream Channel	Criteria 2: Acres of Riparian	Criteria 3: Hydrology	Criteria 3: Water Quality	Criteria 3: Habitat	Criteria 4: Hydrology	Criteria 4: Water Quality	Criteria 4: Habitat	Total Normalized Rank Scores
A7C-ALPV	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.7	3.9
A7C-FEC-M (Preferred Alternative)	0.8	0.3	0.2	0.2	0.2	0.4	0.6	0.9	3.7
CC ALPV	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	7.0
CC	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
FEC-M	0.9	0.4	0.4	0.4	0.4	0.9	1.0	0.9	5.2
FEC-W	0.7	0.2	0.2	0.2	0.2	0.5	0.7	0.7	3.6

Source: R.D. Smith, ERDC, 2005

TCA's alternatives/LEDPA analysis concludes (FEIS-SEIR, p. ES-19):

Preferred Alternative and LEDPA Selection

Of the three corridor alternatives remaining after the practicability analysis, the A7C-FEC-M-Initial corridor with design modification incorporated was selected by the Collaborative as the Preferred Alternative. In addition to meeting the seven criteria for evaluating the practicability of alternatives listed in the NEPA/404 MOU Guidance Paper and being better or comparable to the other two alternatives in terms of impacts to aquatic and biological resources the Preferred Alternative allows the greatest wildlife connectivity and is more compatible with local existing land use plans. More specifically, the Preferred Alternative was selected over the FEC-M Alternative because it does not cross Cañada Gobernadora and it minimizes impacts on open space areas contemplated by the RMV Ranch Plan. The Preferred Alternative was selected over the FEC-W Alternative because it is more compatible with the proposed RMV development plans and the anticipated NCCP reserve design, does not impact RMV heritage sites, and it does not cross Cañada Gobernadora.

Selection of the Preferred Alternative represents a coordinated balanced approach to minimizing harm to both the natural and built environments. The A7C-FEC-M as the Preferred Alternative culminates years of analysis and evaluation, engineering refinement, inter-agency consultation and coordinated consensus. ACOE will make the final decision on the LEDPA and a determination of compliance with the Section 404 (b)(1) Guidelines during the 30-day review period for the FEIS.

The following excerpts from FSEIR Table 4.27-1 provides Benefit/Impact comparisons for three of the alternatives: the proposed toll road, the central corridor, and I-5 widening.

Alignment	Benefits	Impact
A7C-FEC-M-I&U[1]	• Improvements to 13 arterial intersections. • Improvements to 5 I-5 freeway mainline segments. • Improvements to 2 freeway/tollway ramps. • Short-term construction jobs: 17,000 jobs (I) and 21,000 jobs (U). • Travel time savings: 21,000 hr/day (RMV) and 25,000 hr/day (OCP). • Additional travel route opportunities.	• Deficiencies in 4 freeway/tollway ramps (indirect). • Construction costs: $645 million (I) and $800 million (U). • Acquisition/relocation costs: $70 million (I) and $73 million (U). • Displaced housing units: 80 units (I) and 92 units (U) • Displaced persons: 256 persons (I) and 293 displaced persons (U) • 2 ha (6 ac) (I) and (U) of rated agricultural land. • 89 ha (220 ac) (I) and 92 ha (227 ac) (U) of agricultural reserves • Impacted riparian habitat: 17 ha (I) and 19 ha (U) • Impacted plant communities: 447 ha (I) and 464 ha (U). • Impacted waters of the US: 14 km (I) and 15 km (U).

CC-I&U	• Improvements to 11 arterial intersections. • Improvements to 5 I-5 freeway mainline segments. • Improvements to 2 freeway/tollway ramps. • Short-term construction jobs: 23,000 jobs (I) 31,000 jobs (U). • Travel time savings: 18,000 hr/day (RMV) and 26,000 hr/day (OCP). • Increased safety. • Additional travel route opportunities.	• Deficiencies in 1 arterial intersection. • Deficiencies in 2 freeway tollway ramps. • Deficiencies in 3 freeway/tollway ramps (indirect). • Construction costs: $703 million (I) and $944 million (U). • Acquisition/relocation costs: $419 million (I) and $435 million (U). • Displaced housing units: 593 units (I) and 602 units (U). • Displaced persons: 1,380 persons (I) and 1,405 persons (U). • 1,100 displaced employees. • 106 displaced uses (89 commercial uses). • 18 ha (43 ac) (I) and 22 ha (53 ac) (U) of rated agricultural land.

I-5	• Improvements to 9 arterial intersections. • Improvements to 5 freeway/tollway ramps. • Improvements to 9 freeway (I-5) mainline segments. • 43,000 short-term construction jobs. • Travel time savings: 20,000 hr/day (RMV) and 22,000 hr/day (OCP).	• Deficiencies in 2 arterial intersections. • Deficiencies in 4 freeway/tollway ramps. • Construction costs: $1.331 billion. • Acquisition/relocation costs: $1.07 billion. • 838 displaced housing units.

Opponents' Contentions
TCA received over 7000 comments on the Draft SEIR. In comments on both the Draft SEIR and the Final SEIR, commenters strongly criticizing the objectivity of the alternatives analysis included the following non-governmental organizations (NGO's), Sierra Club, Endangered Habitats League, Natural Resources Defense Council, Sea and Sage Audubon Society, Audubon California, Surfrider Foundation, Defenders of Wildlife, and the California State Parks Foundation, as well as the California Department of Parks and Recreation and the California Attorney General's Office. In addition, the California Attorney General and the State Park and Recreation Commission have both commented on the Draft and Final EIR, and filed a lawsuit challenging the SEIR under CEQA.

The FSEIR comments from the above NGOs (Jan. 12, 2006, letter from Shute, Mihaly, & Weinberger), which contained extensive technical documentation and numerous consultant reports, stated:

> *The FEIR's failure to adequate describe and mitigate the environmental impacts of the preferred alternative is only one of the ways inaccurate information has been presented in a manner that is biased toward that alternative. TCA has long justified its promotion of this environmentally devastating alternative over the far more logical option of expanding capacity along the exiting [sic] Interstate-5 corridor by claiming that I-5-focused alternatives would require displacement of a huge number of homes and other buildings, and are therefore economically and socially infeasible. No evidence has ever been provided to justify this claim. We now have clear evidence that shows that the number of buildings that would be displaced by one such alternative (AIP) within the critical San Clemente segment is more than 10 times lower than represented by TCA. Yet, TCA's drastic misrepresentation of displacement impacts*

> *had effectively eliminated the AIP from consideration, despite its obvious environmental and traffic benefits.*
>
> *… The EIR must be revised to provide a true accounting of the impacts of the preferred alternative and include specific, binding mitigation to reduce those impacts to the fullest extent feasible. Just as importantly, in light of the new information indicating the clear viability of I-5 based alternatives, the Board should direct staff to fully consider a range of options that focuses on improving the existing I-5 corridor while minimizing displacement, and to include these alternatives in the environmental analysis. Certification of the EIR and approval of the project based on the current record would violate CEQA.*
>
> …
>
> *The result of [our consultant's] study shatter the validity of TCA's assertion that a non-Corridor alternative is infeasible and cost-prohibitive due to displacement impacts. Whereas TCA identifies 280 buildings that would purportedly need to be taken in San Clemente, KCA engineering's analysis shows that the actual number is between 23 and 27 – a reduction by more than a factor of ten. Of these, only 9 are single-family homes, compared with 125 single-family homes identified as requiring displacement by TCA – a fourteen-fold reduction.*
>
> *These results not only discredit the conclusions of the relocation study with respect to San Clemente impacts, but call into question all of that study's numbers; indeed, given the constraints are far more severe in San Clemente compared to the segments to the north, TCA's displacement estimates in those segments are likely to be inflated by an even greater factor.*

A supplemental letter (Jan. 18, 2006, letter from Shute, Mihaly, & Weinberger to TCA) states:

> *There is simply no basis for concluding that an I-5-focused alternative is infeasible. It is imperative that TCA, in conjunction with Caltrans, fully develop a modified version of the AIP alternative, provide an* accurate *accounting of the displacement impacts of that alternative, and consider design and engineering solutions to further minimize or avoid those impacts. TCA should also explore with the state financing solutions for such an alternative, including but not limited to toll lanes as authorized by federal law.*

These comments also included, as attachments, consultant reports by Smart Mobility[26] (one prepared for the California State Parks Foundation entitled "A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County

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[26] Smart Mobility, Inc., *A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project*, July 2005.

Infrastructure Improvement Project" (July 2005), and a second report prepared for the Endangered Habitats League entitled "AIP Alternative Refinement for the San Clemente I-5 Interchanges" (July 2005)). These reports provide substantial evidence documenting that far less costly and less socially disrupting I-5 widening alternatives are available than described by TCA.

Also attached were comments by Conservation Biology (Aug. 4, 2004) stating:

> *[TCA] …greatly understates impacts to threatened and endangered species for various alternatives. First, in quantifying only direct (i.e., grading) impacts this table ignores the actual biological effects of the alternatives on the species. Indirect effects – especially habitat fragmentation, impacts to wildlife movement, and changes in water quality – are likely to have far greater biological impact on these species than will direct grading impacts to individuals or populations. …*
>
> *Second, using number of individuals as the "metric" for quantifying impacts to listed species is inexact, misleading, and inappropriate. For example, the table shows zero impact to Pacific pocket mouse individuals by any alternative. As detailed in our attached comments, this is a meaningless quantification, based only on the fact that consultant traps did not capture Pacific pocket mice within the limits of grading. However, a legitimate biological analysis of the project impacts reveals that any of the far eastern alignments … will likely extirpate one and perhaps two of only four remaining Pacific pocket mouse populations. At any rate, the FEC alternatives would preclude recovery of the species under the Pacific pocket mouse Recovery Plan (USFWS 1998). Direct and indirect impacts to suitable habitat of listed species would be a more appropriate way to quantify project impacts.*

These NGO's August 6, 2004, comments on the Draft EIR stated:

> *The impacts that are addressed in the DEIS/R are presented in such a biased and skewed format so as to undermine efforts by the public and decision-makers to understand and assess the differences among alternatives and compare the impacts to current conditions. Tables that purport to assess and compare the impacts of each alternative merely indicate whether a resource is impacted or not, without distinguishing the extent of this impact. As one of countless examples, the DEIS/R states that each alternative would have significant and unmitigable impacts to coastal sage scrub but fails to note that impacts from the FEC-W Alternative are over 20 times that of the I-5 Alternative. DEIS/R, Table 7.11-1. Indeed, given the immense volume of materials, an accurate portrayal of the extent of impacts from each alternative in the DEIS/R's many comparative tables is critical to enable the public and decision-makers to intelligently take into account the environmental consequences of each alternative. CEQA Guidelines § 15151. In a seeming effort to obstruct such an informed evaluation of the Project, the DEIS/R fails to provide such data.*

…

The DEIS/R also fails to provide a biologically meaningful assessment of fragmentation impacts. In varying degree, the FEC Alternatives would cut through what is now contiguous habitat, with the FEC-M Alignments being most severe. Rather than actually analyze fragmentation effects on species of concern, the DEIS/R merely provides the acreage of vegetation communities falling on either side of the proposed Alternative to an arbitrary political boundary. To provide meaningful and understandable information of project impacts, a revised DEIS/R must look at the continued viability of species of concern on either side of a proposed alignment, with or without functional wildlife corridors to facilitate movement.

Attached supporting comments from the Conservation Biology Institute (July 2004) include:

Fragmentation impacts are presented in such a cursory manner as to prevent reasonable evaluation of project impacts or to compare relative impacts among alternatives. This superficial treatment fails to reveal substantial differences among alternatives in the nature and degree of their impacts. In particular, the presentation obscures the fact that any of the three Far Eastern Corridor (FEC) Alternatives would have substantially greater impacts on biological resources than would the other alternatives.

…

Habitat fragmentation is perhaps the single most important class of impacts to biological resources for various corridor alignments. It is therefore surprising that the EIS/SEIR presents no meaningful factual analysis of these effects or how they compare among the various alternatives. The "analysis" presented is simply a poorly organized table of acreages of vegetation communities falling either west or east (to an arbitrary, political boundary) of each alignment. This is biologically meaningless as presented, and is organized in a way that obscures any direct or meaningful comparison of alignments. This is just one of many examples where the EIS/SEIR buries the reader in voluminous text and numbers instead of presenting the actual impacts of each alternative in a coherent manner that would facilitate meaningful comparisons among them.

…

The EIS/SEIR makes no attempt to quantify, or even fully disclose qualitatively, the nature and extent of indirect impacts of road corridors. Roads cause increased invasions by exotic weeds and other edge effects, direct mortality via road kill, disruption of natural migration or movement patterns, interference with species communication, changes in water runoff and flow patterns, and air, water, and soil

pollution (Trombulak and Frissell 2000, Forman and Deblinger 2000, Jones et al. 2000, Reijnen et al. 1997).

…

The EIS/SEIR's conclusion that impacts associated with the FEC Alternatives would exceed those of the other Alternatives "in the absence of the NCCP/HCP" (a) relies on a fallacious assumption that eventual approval of an NCCP/HCP would automatically equalize the impacts of the various Alternatives, and (b) ignores the fact that implementing one of the three FEC Alternatives would conflict with NCCP/HCP planning guidelines, thereby reducing the NCCP/HCP's ability to mitigate the SOCTIIP project's adverse environmental effects. Specifically, the FEC Alternatives:

1. Invade the largely undeveloped watershed of San Mateo Creek, including the Donna O'Neill Land Conservancy;

2. impact greater areas of sensitive native habitats than do other build alternatives;

3. encroach closely upon the Pacific pocket mouse population west of lower San Mateo Creek, precluding that population's recovery;

4. fragment the natural landscape considerably more than any of the remaining build alternatives; and

5. could precipitate the extirpation of certain sensitive species from the study region (e.g., mountain lion, American badger, golden eagle).

In each of these respects, these Alternatives violate important NCCP reserve design principles and recommendations of the NCCP/SAMP Working Group.

…

To help remedy the EIS/SEIR's biased and deficient alternatives analysis, it would be appropriate to prepare a new matrix that compares the gross biological impacts of each SOCTIIP Alternative. Appropriate contents of the matrix would include, but may not be limited to the following, as guided by recommendations in these comments: (1) total area of grading; (2) relative degree of landscape fragmentation; (3) grading impacts to sensitive plant communities; (4) grading impacts to sensitive wildlife species; (5) total area of potential indirect effects (including "road-effect zones") for sensitive species; (6) direct and indirect impacts to "important populations," "major populations," and "key populations" of each of the Southern Orange County NCCP "planning species;" and (7) overall consistency with Southern Orange County NCCP/SAMP planning guidelines and recommendations.

The California Department of Parks and Recreation's comments on the DSEIR (Aug. 2, 2004) state that the project's impacts to SOSB "… cannot be sufficiently mitigated and should not be considered as the preferred alternative." In commenting (Jan. 5, 2006) on the FSEIR (Jan. 5, 2006), the California Attorney General also stated that the SEIR had underrepresented visual, recreation, noise, effects and overstated TCA's ability to mitigate these impacts, and was inadequate for the purposes of CEQA.

TCA's responses to all comments on the DEIR, as well as the entire Final SEIR, can be found at http://www.thetollroads.com/home/finalseir.htm . In its responses, TCA defends its analysis and methodology, and concludes that the proposed project is the least environmental damaging practicable alternative.

Transit Options and the Citizens Beltway Concept
In response to Commission staff questions, TCA provided the following explanations for its position on transit options and a "beltway" concept put forth by the "Fix-the-5 Working Group." Concerning transit options, TCA concluded:

> *In summary, based on the existing and anticipated employment and residential densities in south Orange County, the existing and anticipated development patterns in [the] study area, the need to serve demand which would not be met by LRT [Light Rail Transit], and past and anticipated future LRT planning, LRT is not a feasible transportation system option in south Orange County. Therefore, an all-transit alternative assuming implementation of an LRT system in south Orange County is not evaluated in this EIS/SEIR.*

The "beltway" concept would be a connecting toll road that connected the two southern termini of the Foothill North (SR241) and the San Joaquin Hills Transportation Corridor (SR73). TCA states that this alternative would not provide congestion relief on I-5 where it is needed, that it would result in considerable community impacts, and that it is the responsibility of local jurisdictions to determine the alternative's merit for inclusion on Orange County's Master Plan of Arterial Highways.

Wetland Avoidance Alternative
The Commission staff requested analysis of potential alternatives that would avoid wetland fill (at least with respect to coastal zone wetlands), in the form of potential feasible bridge designs that would span the creek and avoid the need for pilings in the creek. TCA responded with an analysis of a number of engineering alternatives for the bridge, including several that could span the creek. In order to span the creek, bridges would need to include suspension cables that would cause significant adverse visual effects. If the Commission were to accept the premise that the proposed alignment were the least damaging feasible alignment, the Commission would need to examine the tradeoffs inherent in comparing the wetland fill to the increased visual impact from such designs, which would necessitate determining whether a conflict existed between Coastal Act policies, and how, under Section 30007.5 (see the Conflict Resolution Section of this report), such conflict could be resolved in a manner most

protective of significant coastal resources. However, as will be discussed below, because the Commission does not agree that the proposed alignment is the least environmentally damaging feasible alternative, it does not need to address this question further.

Commission Analysis

Less Damaging Alternatives

The Commission finds the above opponents' contentions, along with their corroborating expert testimony, have provided convincing arguments that the three San Mateo Creek alternatives (i.e., the proposed project (A7C-FEC-M), and the FEC-W and FEC-M alternatives), would clearly result in significantly more environmentally damaging, and by far more irrevocably damaging, impacts to environmentally sensitive habitat, wetlands, public access and recreation, and cultural resources. TCA's habitat comparisons have not taken into account the quality of the habitat, including severe threats (if not extinction) to the Pacific pocket mouse, severely adverse indirect effects, particularly overall habitat fragmentation effects on wildlife movement, and other modifications to a particularly valuable regional habitat mosaic (as discussed in the ESHA Section of this report), the regionally significant, higher quality, and uniqueness of the recreational (including surfing) resources as discussed in the Public Access and Recreation Section of this report), and the archaeological resources (as discussed in the Archaeological Section of this report). When the value of these resources is taken into account, the Commission finds the three eastern "FEC" alternatives to be more environmentally damaging than the remaining alternatives.

In terms of the difference between these 3 particular eastern ("FEC") alternatives, their impacts in coastal zone resources are fairly similar, although the Commission agrees with TCA that *among* these three alternatives, the proposed A7C-FEC-M is probably less damaging than the two more further east alignments (FEC-W and FEC-M), because those would result in greater fragmentation effects.

The preponderance of the available evidence leads the Commission to find that the adverse effects discussed in the ESHA, Wetlands, Public Access and Recreation, Surfing, Water Quality and Archaeological Sections of this report to the endangered Pacific pocket mouse and other listed species, from overall regional habitat fragmentation, to wetlands, to the campground in Subunit 1 and the other recreational resources discussed previously, to cultural resources, and to water quality, would result in the degradation of one of the healthiest and most intact coastal canyons and watersheds in southern California, which provides recreational and habitat benefits unparalleled in the region. The Commission further finds that the effects would be permanent, irrevocable, and, for the most part, unmitigable. The Commission believes TCA's assertions to the contrary, as well as its assertions that non-San Mateo Creek watershed alternatives would be more environmentally damaging, are unpersuasive and undocumented. No other alternative alignment poses the threat of unmitigable and irrevocable impacts of such magnitude. These impacts simply cannot be found consistent with the applicable Coastal Act policies, and the Commission finds that the proposed project (aside from FEC-W and FEC-M) would be the *most* environmentally damaging alternative amongst the list of alternatives considered by TCA. The proposed alignment also raises disturbing

questions about the security of areas considered to be set aside in perpetuity as habitat preserves, state parks, and in the case of the campground, mitigation for impacts of previously-approved development.

The Commission therefore finds that the Central Corridor (CC), Central Corridor-Avenida La Pata (CC-ALPV), Alignment 7 Corridor-Avenida La Pata (A7C-ALPV), Arterial Improvements Only (AIO), the I-5 Widening Alternative (I-5), and the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road ("Smart Mobility Report, Revised January 2008, with accompanying Peer Review (Bergmann Associates, January 23, 2008)), would all be less environmentally damaging alternatives than the proposed alternative. TCA has provided evidence that any of these alternatives would improve the region's traffic congestion problems. The Commission finds that that any of these alternatives, if carried forward to a complete level of design, with impact avoidance, minimization, and mitigation measures, would be less environmentally damaging than the proposed alternative.

TCA's Response to CCC Report, p. 102-126, questions the validity of the September 2007 "Smart Mobility" Report. The report has been revised to respond to these criticisms. The Smart Mobility Report concludes:

CONCLUSIONS

- *At the planning design level of review, the AIP-R is a practicable, prudent and feasible alternative to the proposed Foothill South Toll Road that warrants further development and analysis.*

- *The AIP-Refined (AIP-R) alternative results in limited displacement when carefully designed to avoid private property, consistent with good engineering practice for designing transportation infrastructure in urbanized areas. This negates the primary reason for the rejection of the AIP alternative in the SEIR, impacts to private property.*

- *Based on the SEIR data, the AIP-R alternative will have similar results the toll road in relieving I-5 congestion, regional travel time savings and other typical traffic performance measures.*

- *The design described in this report significantly reduces (about 95% based on preliminary estimates) the displacements identified in the SEIR without sacrificing performance.*

In addition, a peer review has been conducted by Bergmann Associates (January 23, 2008) (Exhibit 11 of the list of exhibits included with the first addendum to the original staff report) on the revised, January 2008, Smart Mobility Report (Appendix F). This peer review concludes:

Displacement of people and businesses for the AIP alternative can be markedly reduced. *Smart Mobility, utilizing representative example of possible modifications to the AIP alternative, presents a strong case that there are numerous alternative approaches to the TCA design that have solid potential to greatly reduce the overall right-of-way impact and cost.*

Detailed studies are necessary to determine the extent to which displacements can be reduced. *Along a highway such as I-5, characterized by heavy development immediately adjacent to the existing highway boundary, a relatively small change in the design approach for proposed improvements can make a huge difference in right-of-way impacts. The extent to which displacements of people and businesses could be reduced for the AIP alternative can only be reliably determined through a renewed effort by TCA to explore a broad range of opportunities to do so. Some possibilities have been suggested by Smart Mobility and there are likely others that TCA could discover.*

Comparison between the AIP alternative and the toll road alternative are inconclusive until detailed studies are complete*. The AIP alternative as developed by TCA does not demonstrate the level of innovation and context sensitivity typically undertaken for projects in a tight urban environment characteristic of the I-5 corridor and its ancillary arterial network. Until TCA undertakes a study that demonstrates innovation and context sensitivity, their estimate of right-of-way impacts for the AIP alternative should be considered invalid and much greater than necessary.*

The costs and impacts for the toll road alternatives as presented in the SEIR are not representative of actual circumstances. *If the toll road is constructed, it is likely many of the operational and safety problems that the AIP alternative would have resolved along I-5 and at arterial intersections will remain. Some, if not all of these problems will still need to be addressed. The construction cost, and right-of-way cost and impacts for this work are elements of the overall true cost and impact of the toll road alternatives. Only when these are included in the analysis can a truly representative comparison be made between toll road alternatives and a revised AIP alternative.*

A refined AIP alternative should be presented in the SEIR. *Considering the high marks that the original AIP was given in the SEIR, other than the right-of-way impacts, and given that the Report suggests viable ways of significantly reducing the extent of right-of-way impacts, it is apparent that the AIP-R concepts and other refinements should be thoroughly pursued, developed, and presented in the SEIR by TCA before a final recommendation is made to decision makers.*

Feasibility

The Coastal Act (Section 30108) defines "feasible" as: "… capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

In reviewing TCA's "practicability" criteria for why TCA rejected all but the eastern San Mateo Creek alternatives (see pages 93-95 of this report), the Commission disagrees with TCA's assertions that the Central Corridor (CC), Central Corridor-Avenida La Pata (CC-ALPV), Alignment 7 Corridor-Avenida La Pata (A7C-ALPV), Arterial Improvements Only (AIO), and the I-5 Widening Alternative (I-5) alternatives are infeasible due to cost of construction (TCA Criterion 2, page 94 of this report). The Commission does not agree that the CC, I-5 Widening, A7C-ALPV, and AIO Alternatives are infeasible due to cost, and, based on the evidence before it of a substantially lower cost I-5 alternative, as described in the "Smart Mobility" Reports, the Commission does not agree that TCA's costs estimates provide realistic cost and social disruption comparisons.

The Commission does not agree with TCA's rejection of the CC alternative for "operational and safety" reasons (TCA Criterion 3), and the Commission notes this conflicts with the SOCTIIP Collaborative's Chart (Consistency Certification, Table 1) which only appears to reject the alternative because it "requires removal of several hundred homes and businesses."

The Commission does not agree with TCA's rejection of the CC, CC-ALPV, I-5 Widening, A7C-ALPV, and AIO Alternatives for "unacceptable adverse, social, economic, and environmental impact" reasons (TCA Criterion 4), or for "serious community disruption" reasons (TCA Criterion 4), because the comparisons of these impacts, and the overweighting of community disruption do not compare the quality of resources being affected or reflect prioritization of resource values according to the resource priorities contained in the Coastal Act

Finally, the Commission does not agree with TCA's rejection of the I-5 Widening and AIO alternatives due to "logistical and technical constraints" reasons (TCA Criterion 7), for the same reasons provided for Criterion 2. The Smart Mobility Reports referenced provide ample technical, economic, and social data to show the I-5 widening is a logistically and technically feasible alternative.

The Commission further finds that project opponents have made a compelling case that I-5 widening can be implemented in a far less costly and less socially damaging manner than described by TCA, which vastly increases its feasibility compared to the proposed alternative, by reducing cost and lessening community disruption. Opponents also point out that availability of funding should not be considered a constraint and recommend that TCA explore with the state financing solutions for such an alternative, including but not limited to a toll lane concept for use in I-5. The Commission further finds that, regardless of the cost, TCA's assumption that community disruption and higher economic cost can be accorded higher

priority than extremely limited and valuable sensitive habitat, recreation, and archaeological resources is inconsistent with the resource protection priorities spelled out in the Coastal Act. The Commission therefore strongly disagrees with TCA's and the Collaborative's dismissal as impracticable of this alternative due to excessive economic cost, and social and community disruption.

Economic costs can be recaptured by tolls, and social and community disruption is not nearly as significant as the irrevocable impact that extinction of an endangered species, loss of a unique campground and recreational experience, and other threats to significant coastal zone resources represent. Therefore, based on the priorities established in the Coastal Act, the Commission concludes that the proposed project does not represent the least environmentally damaging feasible alternative and is, therefore, inconsistent with the alternatives test of Section 30233(a) of the Coastal Act.

c) Mitigation Test

The Commission originally received documentation for TCA's consistency certification on March 23, 2007. A series of four separate documents presented inconsistent and contradictory data about the amount of impacts to wetlands. The Commission requested clarification from TCA on July 9, 2007 and TCA responded with new data on September 4, 2007 (dated July 27, 2007) and on December 27, 2007 (dated December 18, 2007).

The wetland delineation dated December 18, 2007, corrected most of the shortcomings of the delineation dated July 24, 2007[27]. The methods followed standard protocols and the delineation was appropriately based on the Coastal Commissions "one-parameter" wetland definition. There were errors in three of the data sheets that resulted in each of those three sample points being incorrectly categorized as "upland" when wetland vegetation was present. Two of those sample points may have been included within a mapped wetland; however, because of the large size of the sample symbols relative to the map scale, the Commission is unable to definitively make this determination from the materials submitted. The third point was not mapped as a wetland. As a result of these errors, the acreage of wetlands present and the amount impacted is currently underestimated by some unknown, although probably small, amount.

Another concern is the distinction made between temporary and permanent wetland impacts. TCA defined permanent impacts as those areas where an actual physical structure will be built. Temporary impacts are defined as all other effects during construction, such as grading and the staging of construction equipment. The Commission inquired with TCA about the length of time anticipated for construction. TCA believes the total construction duration within the coastal zone will last approximately three years. For the wetlands impacted by the connector ramps, construction will be performed in a period of 12-months or less. No time estimate was

[27] Chlup, I. and T. Ly (Glenn Lukos Associates). December 18, 2007. Letter report to D. Lowe (Transportation Corridor Agencies) regarding CCC jurisdictional delineation for the Foothill Transportation Corridor – South, Orange County, California.

provided for wetlands impacted by other means.[28] Mitigation is scheduled to occur within one growing year after construction is complete.[29] This means that it will be about a year, or more likely longer, before replanting begins and an additional year, or more likely longer, to establish mitigation for some of the wetlands. For the remaining wetlands, the length of time impacted is unknown. The Commission has generally considered "temporary" impacts that result in destruction of vegetation or alteration of the soil, especially those lasting a year or more, to be equivalent to permanent impacts. Such areas require restoration and hence the loss of habitat function may be considerably longer than the "temporary impact." In addition, there will be uncertainty regarding the success of the restoration. For those reasons, a mitigation ratio greater than 1:1 is generally appropriate. In order to assess the effects of such impacts, the Commission needs a detailed description of each type of "temporary" impact, including whether vegetation is damaged or removed or soil is disturbed, and the footprint of each type of impact. This information has not been provided.—

For background purposes, notwithstanding the above concerns, TCA provided the following information pertaining to habitat types, acres impacted, and proposed mitigation.

Habitat Types and Species Present
TCA identified the following wetland habitat types within the coastal zone: southern arroyo willow forest, mule fat scrub, vernal pools, and coastal freshwater marsh. Impacts to wetlands are projected to occur in three areas: San Mateo Creek, San Mateo Marsh, and San Onofre Creek.

Species observed in these three wetland areas include:[30] mule fat (*Baccharis salicifolia*), narrow-leaved willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), yellow willow (*Salix lucida*), cattail (*Typha domingensis*), spike rush (*Eleocharis acicularis*), bulrush (*Scirpus americanus*), sedge (*Cyperus* sp.), saltgrass (*Distichlis spicata*), celery (*Apium graveolens*), cudweed (*Gnathalium luteo-album*), white alder (*Alnus rhombifolia*), horsetail (*Equisetum* sp.), rabbitfoot grass (*Polypogon monspeliensis*), giant nettle (*Urtica dioica*), bur-reed (*Sparganium eurycarpum*), red-rooted umbrella sedge (*Cyperus erythrorhizos*), straw colored umbrella sedge (*Cyperus strigosus*), California bulrush (*Scirpus californicus*), watercress (*Rorippa nasturtium-aquaticum*), yellow waterweed (*Ludwigia peploides*), water speedwell (*Veronica anagallis-aquatica*), southern cattail (*Typha domingensis*), common monkey flower (*Mimulus guttatus*), and western sycamore (*Platanus racemosa*).

Acres Impacted
Within the coastal zone, TCA estimates there will be 0.16 acres of permanent impacts to southern arroyo willow forest and 7.70 acres of temporary impacts to southern arroyo willow forest and coastal freshwater marsh (Exhibit 23). Permanent and temporary impacts will occur in San Mateo Creek, San Mateo Marsh, and San Onofre Creek.[31]

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[28] TCA response to Commission staff questions via e-mail on September 7, 2007.
[29] *See* Footnote 26.
[30] *See Wetlands Letter* at 8-9.
[31] *See Wetlands Letter* at 10-11.

San Mateo Creek
Permanent impacts from four bridge supports will total 0.006 acres of wetland fill. Temporary impacts from bridge construction total 5.75 acres.

San Mateo Marsh
Permanent impacts from grading for Tobi's Road realignment total 0.147 acres of wetland fill. Temporary impacts from Tobi's Road realignment total 0.89 acres.

San Onofre Creek
Permanent impacts from bridge bents will total 0.005 acres of wetland fill. Temporary impacts from bridge construction total 1.05 acres.

Mitigation
TCA submitted a very conceptual mitigation plan. Permanent impacts to wetlands will be mitigated at a 6.25:1 ratio and will entail the creation of 1.0 acres of southern willow woodland. This newly created acre of willow will be located on a former agricultural field within the coastal zone, directly adjacent to an extended detention basin and the proposed toll road (Exhibit 26).[32] It would be semi-isolated, apparently not connected with either the San Mateo Marsh wetlands or the San Mateo Creek wetlands.[33] Although TCA asserts that approximately 40 feet of the mitigated wetlands will be contiguous with San Mateo Marsh East, given that a dirt road separates the two it is unclear how this connection will occur.

There does not appear to be a significant buffer between the mitigated land and the detention basin or the proposed toll road, leaving it exposed to indirect impacts from the highway, polluted runoff, and edge effects. Although TCA asserts that no buffer is needed, because the I-5 is already subjecting the impacted wetlands to the same indirect impacts the proposed toll road would, the Commission does not agree. First, the Commission generally requires a buffer of at least 100 feet for all mitigated wetlands. Second, subjecting the surrounding wetlands to two highways, rather than just the I-5, is a cumulative effect further diminishing the site's value.

Without a detailed mitigation plan that includes descriptions of topographic alterations, the source of hydrology, what exactly the detention basin (most recently now called as a sand media filter) is, and how all of this will be constructed, this proposal cannot be adequately evaluated.

A larger inland mitigation site has also been proposed by TCA. In addition to not having performed a jurisdictional wetlands delineation or vegetation mapping at this site, it is located

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[32] Earthworks Restoration Inc., Glen Lukos Associates, BonTerra Consulting, *Conceptual Habitat Mitigation and Monitoring Plan, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) Orange and San Diego Counties, California,* Prepared for TCA, August 31, 2007.
[33] *See* Footnote 26.

outside of the coastal zone, approximately 12 to 16 miles inland in an entirely separate watershed. TCA is proposing the creation and/or restoration of 7.31 acres of wet meadow, 3.06 acres of mule fat scrub, and 4.66 acres of southern willow woodland near Chiquita Creek in the San Juan watershed. The mitigation will take place in 4 separate locations and will not function as one continuous mitigation site.[34] Although the lack of a wetlands delineation and vegetation mapping makes it impossible to assess if this would be a suitable mitigation site for the permanent wetlands impacts, the location of this proposed mitigation is too far from the coastal zone to mitigate coastal zone wetland fill impacts.

Section 30233(a) Conclusion

To conclude, the Commission finds that the proposed toll road: (1) is not an allowable use under Section 30233(a)(4) and does not qualify under any of the other allowable uses in Section 30233(a); and (2) is not the least environmentally damaging feasible alternative. The Commission therefore finds the proposed toll road inconsistent with Section 30233(a). In addition, the Commission lacks sufficient information to determine whether it meets the third (mitigation) test of Section 30233(a), because TCA has not provided sufficiently detailed information regarding the temporary impacts and mitigation plan.

Section 30233(c) Conclusion

TCA is required to show that the filling of wetlands within the coastal zone maintains or enhances the functional capacity of the wetlands and estuaries in the impacted area. Although TCA has now provided functional analysis to the Commission demonstrating the proposed toll road will increase functional capacity, serious issues such as statistical bias and unsubstantiated conclusions have been raised by a biologist from the Conservation Biology Institute. He expressed additional concerns that the major functions and conservation values that would be affected by the project have not been addressed and/or impacted to a significantly greater extent than acknowledged.[35] This should be responded to.

Conclusion

The Commission concludes that the proposed toll road is inconsistent with the first two tests of § 30233(a) of the Coastal Act (i.e., the allowable use and alternatives tests), and, further, that the Commission lacks sufficient information to enable it to determine whether the proposed toll road would be consistent with the third test of Section 30233(a) (the mitigation test). The Commission therefore concludes that the proposed toll road is inconsistent with the Coastal Act's wetland policy.

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[34] *See* Footnote 31..

[35] Michael D. White, PhD., Conservation Biology Institute, *CCC Jurisdictional Delineation for the Foothill Transportation Corridor – South, Orange County, California (Glenn Lukos Associates December 17, 2007),* Letter to Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division, California Coastal Commission, January 18, 2008.

C. <u>Public Access, Recreation, and Public Views</u>

Coastal Act § 30210 provides:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act § 30211 provides:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act § 30212 provides, in part:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected.*

Coastal Act § 30213 provides, in part:

> *Lower cost visitor and recreational facilities shall be protected, encouraged and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Coastal Act § 30214 provides:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
>
> *(1) Topographic and geologic site characteristics.*
>
> *(2) The capacity of the site to sustain use and at what level of intensity.*
>
> *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*

> *(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*

Coastal Act §30220 provides:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

Coastal Act §30240 provides, in part:

> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act §30251 provides:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and , where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the local government shall be subordinate to the character of its setting.*

Public Access and Recreation Resources in the Project Area

The primary public access and recreation resources located within the coastal portion of the project area fall within the three subunits of San Onofre State Beach. San Onofre State Beach was created in 1971 by a Presidential Executive Order that resulted in the California Department of Parks and Recreation (CDPR) obtaining a lease[36] from the United States Navy for approximately 2950 acres of Marine Corps Base Camp Pendleton on the border of the City of San Clemente and San Diego County and both the coastal and inland sides of the I-5 freeway. San Onofre State Beach (SOSB) received over 2.4 million visitors in fiscal year 2005/2006[37] and has consistently ranked among the top five most-visited State Parks in California. The park generates nearly $2.8 million in user

[36] Details regarding the terms and provisions of this lease in regard to the granting of rights-of-way and easements will be discussed in the impact assessment portion of this subsection.
[37] Based on data provided in the California Department of Parks and Recreation Statistical Report for Fiscal Year 2005/2006.

fees per year and provides the public with a wide range of opportunities for recreation and coastal access.

As previously described, the majority of the 16 mile route of the preferred toll road alignment proposed by the Transportation Corridor Agency (TCA) lies outside of the coastal zone. As indicated on the map provided in Exhibit 15, however, the proposed route enters the coastal zone in northern San Diego County within San Onofre State Beach and several miles of new construction and additions to I-5 are proposed to occur within the coastal zone. Close to the southern border of both Orange County and the City of San Clemente, this southernmost portion of the proposed toll road alignment passes through or in close proximity to a variety of important coastal zone recreation areas and public beach access points. Coastal recreation areas within or directly adjacent to the project footprint that would potentially be affected by the construction and/or operation of the proposed project include the Cristianitos and Trestles Beach subunits of San Onofre State Beach (also known as subunits 1 and 2), the San Onofre Recreation Beach portion of Marine Corps Base Camp Pendleton as well as the Trestles Wetlands Natural Preserve. These beaches and coastal areas provide the general public and military personnel with a variety of recreation and coastal access opportunities including beachcombing, sunbathing, swimming, surfing, camping, hiking, bicycling, horseback riding and wildlife and ocean viewing. The following sections will provide a description of the recreational resources provided by these areas, a brief discussion of their local, regional, national, and international significance, as well as an analysis of the potential impacts to these resources resulting from the proposed alignment of the toll road and the noise, land form and land use alterations, air quality degradation and viewshed changes associated with the construction and operational aspects of the proposed project.

Cristianitos Subunit – San Onofre State Beach Subunit 1
The Cristianitos or Subunit 1 portion of San Onofre State Beach (SOSB) is located on the inland side of the I-5 freeway and encompasses 1182.7 acres of land both within and outside of the coastal zone. This area contains the San Mateo Campground, a 161 site campground, a 110 car capacity day-use beach parking area, an outdoor education center which seats approximately 110 people, as well as several miles of trails and bikeways, including the 1.5 mile long Panhe Trail that connects the campground to the beaches and two coastal subunits of SOSB, and a portion of the Upper Trestles Trail that connects the Trestles day-use parking area to Trestles beach. This subunit represents the largest undeveloped coastal canyon available for recreational use south of Crystal Cove State Park in Orange County (approximately 20 miles to the north).

The Cristianitos subunit of San Onofre State Beach remained largely undeveloped and inaccessible to the public during the first several decades of the park's existence due to California Department of Parks and Recreation (CDPR) budget limitations that precluded the construction of visitor serving facilities. This situation began to change in 1981 however, when Southern California Edison, San Diego Gas & Electric, the City of Anaheim and the City of Riverside (applicants) applied to the Coastal Commission for a

permit amendment to the San Onofre Nuclear Generating Station's (SONGS) original coastal development permit (permit number 183-73). The implementation of this amendment (permit amendment number 6-81-330-A) required that 2.2 acres of dry sand beach seaward of the generating station be fenced to the mean high tide line and completely closed to all forms of public access. To mitigate this loss of public access and recreation opportunities, the Commission adopted a permit condition that required the applicants' fulfillment of certain mitigation measures. The condition language (included as Exhibit 27 (Special Condition H of permit 6-81-330-A) required that the applicants deposit $3 million into an account and that funds from that account would be payable only to CDPR for the purpose of improving the inland parcel of San Onofre State Beach – the Cristianitos subunit. The condition language also specified that "The funds shall be applied in a manner which will result in creation and opening for public use of a public recreational facility having approximately 200 improved campsites and linked to the beach by a hiking trail" and further that these funds be dispersed "only for the purpose of securing a public coastal access or recreational benefit which will serve the population affected by the loss of access at the [SONGS] project site and which will adequately mitigate for the loss of access at San Onofre."

The adopted findings from the staff report for permit number 6-81-330-A provided additional details about the mitigation measure and state that according to plans developed by CDPR for the Cristianitos subunit of SOSB, the "$3-million will cover the cost of all site preparation, improvement of the access road (Cristianitos Road), connection to the San Clemente wastewater treatment facility, construction of 200 campsites, lavatories and showers, and a hiking trail to the beach…". Although litigation (*Carstens v. California Coastal Commission, et al.*) delayed the payment of these mitigation funds to CDPR until 1988, the opening, development and improvement of the Cristianitos subunit of SOSB began soon thereafter and was completed in 1991. The funds provided to CDPR through the SONGS mitigation arrangement were instrumental in developing the Cristianitos subunit by funding the construction of the 161 campsite San Mateo Campground and its adjoining 110 person capacity educational center, parking lot, restroom and shower facilities, day use areas and several miles of multi-use trails (including the 1.5 mile Panhe Trail that connects the San Mateo Campground to the coastal subunits of SOSB and Trestles Beach).

The permit amendment (6-81-330-A) findings supporting the adoption of the SONGS mitigation measure that allowed the development and opening of the Cristianitos subunit of SOSB clearly specify that this area and its associated campground and trails are intended to serve as public access and recreation resources for the coastal zone. As the staff report states:

> *Conditions of the amended permit require the Applicants to contribute $3-million to secure <u>a public coastal recreational benefit</u>…*

The report also states:

> *There is a great demand for additional camping facilities in the area. Development of new facilities is restricted because of the 15-mile long expanse of Camp Pendleton to the south. During the warm months, campgrounds in the area must turn away tens of thousands of persons. The Commission expects the new facility at parcel 1* [San Mateo Campground] *to significantly increase and enhance public access to the beach segments of the* [San Onofre] *State Beach.* [emphasis added]

Based on visitor use information collected by CDPR over the past decade, the Commission's expectations of enhanced public beach access and coastal recreation opportunities provided through the development of the Cristianitos subunit of SOSB have been successfully met. Development of the Cristianitos subunit has resulted in enhanced coastal recreation and access opportunities at SOSB, increased the number of visitors to nearby coastal areas, and provided low cost visitor and recreational facilities in an area where such facilities are in short supply and high demand. This subunit, although located primarily outside of the coastal zone, facilitates a variety of coastal access, recreation and low cost visitor serving opportunities.

Based on the California Department of Parks and Recreation Statistical Report for Fiscal Year 2005/2006, the San Mateo Campground provides nearly half of the campsites available in San Onofre State Beach and roughly 13% of the total number of state park campsites available in all of coastal Orange and San Diego Counties (161 of the 333 sites available in SOSB and 161 of the 1233 sites available throughout the eight state parks that provide coastal camping in Orange and San Diego Counties, respectively). As one of a limited number of state park coastal campgrounds in southern California, San Mateo Campground represents a substantial proportion of the region's low cost coastal accommodation resources. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*:

> *the affordability of this coastal resource for middle and lower income visitors makes it even more important… As coastal areas in the region continue to become more affluent, the value of this park's resources and affordable recreation opportunities to those of low and moderate income means will also continue to increase.*

According to a resolution adopted by the California Parks and Recreation Commission in November of 2005, San Mateo Campground is typically booked to capacity at least 6 months in advance, year-round, and receives substantially more overnight use than either of the San Onofre State Beach campgrounds located in the southern portion of the park, adjacent to the San Onofre Nuclear Generating Station and the I-5 freeway. CDPR data suggests that the annual number of campground users during fiscal year 2006-2007 was approximately 108,446 and anecdotal evidence has suggested that many of these users

choose to stay at the San Mateo Campground because of its affordability, peaceful and serene natural setting and its proximity to the Panhe Trail which provides easy access to the beach, ocean, and world renowned surf breaks located within the coastal subunits of San Onofre State Beach. Accordingly, the 1.5 mile long Panhe Trail is used on a daily basis by dozens to hundreds of visitors seeking coastal access. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, "There is a strong sense of ownership and emotional connection by the users [of the San Mateo Campground], especially the surfing community…[The] coastal trail access walk is considered part of the Trestles Beach surfing experience."

Trestles Beach Subunit – San Onofre State Beach Subunit 2
The Trestles Beach subunit of San Onofre State Beach is located entirely within the coastal zone on the coastal side of the I-5 freeway and encompasses approximately 213 acres immediately south of the interchange between Cristianitos Road and the I-5 freeway. This subunit is largely undeveloped but contains several beach access and multi-use recreation trails. These trails include: (1) the final one-half mile of the Panhe Trail between I-5 and Trestles Beach; (2) 1.5 miles of the California Coastal Trail that follows the old Highway 101 route parallel to I-5; (3) the half-mile long San Onofre Creek Trail from Basilone Road to Trestles Beach (see Exhibit 28 for the locations of the trails in SOSB Trestles Beach subunit); (4) the 0.75 mile long Lower Trestles Trail from the California Coastal Trail/Old Highway 101 to Lower Trestles Beach; and (5) the final half-mile of the Upper Trestles Trail from the Trestles day-use parking lot in the Cristianitos subunit to Upper Trestles Beach.

This subunit also contains the 82 acre Trestles Wetlands Natural Preserve, an area surrounding the mouth of the San Mateo Creek that was given a special status designation in 1984 to help enhance and protect its biological resources. The Panhe Trail and Upper Trestles Trail join to pass through this wetland preserve and passage along the combined Class I trail has been characterized as a vital part of the experience of surfing at Trestles. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* in reference to the Upper Trestles Trail from the day use parking area along Cristianitos Road to Upper Trestles Beach:

> *The unique coastal conditions at Trestles provide a world renowned surfing experience that cannot be found anywhere else. The long approach walk from a highly urbanized area to the beach through a relatively unspoiled wetlands area provides a sense of transition not experienced at other surfing beaches.*

In addition to these terrestrial recreation resources and beach access trails, the Trestles subunit of SOSB also includes a variety of the west coast's most popular world class surf breaks including Upper Trestles, Lower Trestles, Cottons Point and Church's. These resources will be discussed in detail in the subsequent section devoted to surfing resources in the project area, Section III - D.

The miles of wide, sandy beaches along the coastal stretch of the Trestles subunit also contribute significantly to this area's recreational resources and are a popular destination for beachgoers, swimmers and spectators wanting to enjoy the spectacle of high-performance surfing.

Green Beach – Marine Corps Base Camp Pendleton San Onofre Recreation Beach
Alternately referred to as both Green Beach and the Marine Corps Camp Pendleton San Onofre Recreation Beach, this coastal portion of Marine Corps Base Camp Pendleton is located between the Trestles Beach and San Onofre Surfer's Beach subunits of SOSB. The recreation beach consists of a 57 acre regional park used exclusively by military personnel and their families and guests. The recreation beach includes camping facilities, rental cottages, a clubhouse, lodging facilities, RV camping sites, a concession stand, lifeguard towers, picnic areas, restrooms, beach showers and overnight and day use parking. The Commission notes, however, that this is not a public facility.

Proposed Activities
As described previously in the Project Description, Section I –A, the majority of the proposed project will occur outside of the coastal zone. However, the terminus of the proposed toll road, including its intersection with the existing I-5 freeway would be located within the coastal zone. TCA has estimated the total length of the proposed project within the coastal zone to be 2.2 miles (Exhibit 29). Activities associated with the proposed construction, placement and operation of the toll road and related expansion of I-5 have the potential to affect coastal access and recreation. In the documents titled, *Focused Summary of Environmental Impacts in the Coastal Zone* and *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South*, TCA summarizes the project elements within the coastal zone as follows:

- construction and placement of a 3,910 foot long elevated bridge structure with 14 column supports that crosses I-5 approximately 28 feet above the I-5 grade before crossing the San Mateo Creek and passing under the Basilone Road Overcrossing to provide southbound connection between the toll road and I-5;
- construction and placement of a 3,860 foot long elevated bridge structure with 15 column supports that rises to a height of approximately 20 feet above the I-5 grade over San Mateo Creek before passing under the Basilone Road Overcrossing to provide a northbound connection between the toll road and I-5;
- realignment and reconstruction of the Basilone Road Overcrossing at I-5 along with the four Basilone Road ramps to and from I-5, as well as a portion of Basilone Road.
- use of cut-and-fill grading and retaining walls south of the San Mateo Bridge abutments where the southbound and northbound connector ramps parallel I-5 and pass under Basilone Road to San Onofre Creek;
- widening of approximately 4,000 feet of I-5 south of Basilone Road;

- construction and placement of a 800 foot long and 8 foot high sound wall south of Basilone Road and adjacent to the San Onofre Child Development Center on Marine Corps Base Camp Pendleton;
- widening of the two I-5 bridges over San Onofre Creek;
- construction and placement of a 3,400 foot long and 14 foot high sound wall on the south side of I-5, inland from the military recreation facilities at Green Beach;
- construction and placement of a 1,350 foot long and 16 foot high sound wall east of the San Mateo Point housing area on Marine Corps Base Camp Pendleton west of I-5;
- construction of several thousand feet of 15 to 35 foot high retaining walls along the toll road route;
- reconstruction of a sidewalk at the Basilone Overcrossing;
- construction of a 41 acre stormwater extended detention basin adjacent to San Mateo Creek;
- construction of a 62 acre stormwater extended detention basin adjacent to San Onofre Creek;
- reconstruction and replacement of the San Onofre Gate to provide entry to Marine Corps Base Camp Pendleton; and
- construction of a widened military access road adjacent to San Onofre Creek and under the south span of the existing San Mateo Creek/I-5 Bridge.

In addition to those previously described aspects of the proposed project located within the coastal zone, TCA has also proposed substantial construction activities in close proximity to those portions of the Cristianitos subunit of SOSB that were developed as mitigation for the placement of the San Onofre Nuclear Generating Station. Specifically, TCA has proposed:

- bisecting the Cristianitos subunit of San Onofre State Beach with the toll road and constructing and routing it within several hundred feet of the existing San Mateo Campground;
- constructing an approximately 4,000 foot long by 14 foot high sound wall along portions of the toll road that are adjacent to the campground;
- removing and re-routing over one mile of the Panhe Trail between the San Mateo Campground and the coast (including about 1,500 feet within the coastal zone);
- removing and re-aligning nearly one mile of the existing Cristianitos Road (of which approximately the first 1000 feet would be within the coastal zone);
- constructing an 18 inch high by 5,900 foot long concrete block “mouse barrier wall” topped with a chain link fence along the western side of the proposed toll road (approximately 1,600 feet of which would be within the coastal zone);
- constructing a 400 foot long overcrossing for the newly aligned Cristianitos Road to pass over the proposed toll road;
- constructing an 8 foot wide sidewalk along the northbound side of the re-aligned Cristianitos Road to accommodate the re-aligned Panhe Trail (approximately 1000 feet of which would be within the coastal zone);

- constructing an onramp to allow access from Cristianitos Road to the toll road; and
- removing and replacing utility poles along Cristianitos Road and near the San Mateo Campground.

Potential Effects of Project Activities
As stated in TCA's December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, the activities listed above have the potential to adversely affect recreation and coastal access resources in the project area in a variety of ways. (Note: because the following excerpt includes a discussion of aspects of the proposed project located outside of the coastal zone, those resource areas that exist within the coastal zone portion of the project area have been underlined):

> …*the* [proposed toll road] *will result in the temporary use and permanent acquisitions of property from the proposed San Juan Creek Regional Park, Rancho Mission Viejo Land Conservancy, Donna O'Neill Land Conservancy, SOSB Cristianitos Subunit 1, and SOSB Trestles Subunit 2. …the use of property from these recreation resources will result in adverse effects on amenities at these resources through the removal of open space and recreation improvements and facilities… Based on the types of amenities removed by the temporary use and permanent acquisition of property at these resources, the* [proposed toll road] *will result in an adverse impact on these resources* [including SOSB Cristianitos Subunit 1, and SOSB Trestles Subunit 2]… *The* [proposed toll road] *will fragment SOSB Cristianitos Subunit 1…resulting in a trail from the City of San Clemente being on the west side of the corridor and San Mateo Campground being on the east side. The corridor disturbance and right of way limits will result in the removal of the RV tank pumping station and several fire roads in the north part of SOSB Cristianitos Subunit 1... In summary, the fragmentation impacts of the* [proposed toll road] *will be adverse on* [SOSB Subunit 1]…
>
> *The [proposed toll road] will have noise impacts related to construction and operations. As shown, adverse noise impacts due to operation of the* [proposed toll road] *will occur at Tesoro High School, SOSB Cristianitos Subunit 1 and MCB Camp Pendleton San Onofre Recreation Beach… Also shown…, adverse construction noise impacts of the* [proposed toll road] *will occur at the following resources: Tesoro High School, Talega Community Park, Pacific Golf Club, Vista Bahia Stadium Park, San Clemente Municipal Golf Course, proposed South San Clemente Neighborhood Park (east), SOSB Cristianitos Subunit 1, SOSB Trestles Subunit 2, MCB Camp Pendleton San Onofre Recreation Beach and SOSB Surfer Beach Subunit 3. These impacts indicate expected noise levels greater than 67 dBA (Leq) at these resources.*

> *The* [proposed toll road] *will not adversely affect access to and from recreation resources in the vicinity of the alignment as shown…with the exception of* *SOSB Cristianitos Subunit 1*. *Permanent access is provided in the design and right-of-way for the* [proposed toll road]. *However, there may be temporary access impacts during construction of* [the proposed toll road]…
>
> *Operation of the* [proposed toll road] *will not result in substantial long-term local air quality impacts, based on the findings of the Air Quality Technical Report… During construction of* [the proposed toll road], *some short-term dust and construction emissions may result in temporary adverse impacts on adjacent uses, including the recreation uses. Those impacts would be substantially mitigated based on mitigation measures provided in the Air Quality Technical Report. However, resources within 150 ft of the centerline could experience substantial adverse short term air quality impacts, even with mitigation, during construction. As shown…, the* [proposed toll road] *could result in short term adverse air quality impacts during construction on proposed San Juan Creek Regional Park, proposed San Juan Creek Trail Extension, Rancho Mission Viejo Land Conservancy, The Donna O'Neill Land Conservancy, proposed Cristianitos Trail,* *SOSB Cristianitos Subunit 1* *and* *SOSB Trestles Subunit 2*.
>
> *As shown…, the* [proposed toll road] *will result in adverse changes in views from the following resources: proposed San Juan Creek Regional Park, Rancho Mission Viejo Land Conservancy,* *SOSB Cristianitos Subunit 1*, *proposed San Juan Creek Trail Extension, proposed Cristianitos Trail and proposed Prima Deshecha Trail.* [The proposed toll road] *will result in changes in views from the following resources: Tesoro High School Sports Fields, General Thomas R. Riley Wilderness Park, Caspers Regional Park, Talega Community Park, Rancho San Clemente Ridgeline Trail, Pacific Golf Club,* *SOSB Trestles Subunit 2, SOSB Surfer Subunit 3*, *and MCB San Onofre Recreation Beach. The change in views from these resources is not considered to be adverse because the views from these resources will not be substantially changed or these resources are not considered to be sensitive to changes in the viewshed.*

As TCA's analysis suggests, the construction and operational aspects of the proposed project with the potential to affect recreation and coastal access resources within the coastal zone can be divided into categories: land acquisition, noise, and visual. For organizational purposes, the following discussion and analysis will make use of these categories and build on the preliminary analysis provided by TCA above.

Temporary and Permanent Land Acquisition

Based on information provided by TCA in the December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, the proposed toll road would require the acquisition of approximately 27% of the total area contained within the Cristianitos subunit of SOSB (40.8 acres of

temporary occupation and 290 acres of permanent acquisition) and approximately 9.6 acres within the Trestles Beach subunit of SOSB (1.0 acres of temporary acquisition and 8.6 acres of permanent acquisition). Although the most of the approximately 330.8 acres of SOSB that will be temporarily and permanently acquired by TCA would be outside of the coastal zone, these lands include the permanent acquisition of 36.3 acres of SOSB subunits 1 and 2 within the coastal zone on the inland and coastal sides of I-5 (26.7 acres of subunit 1 and 9.6 acres of subunit 2, respectively) and the temporary occupation and use of an additional 100 acres of SOSB and Marine Corps Base Camp Pendleton within the coastal zone during the three year construction phase of the proposed project.

The California Department of Parks and Recreation (CDPR) has held a lease from the U.S. Department of the Navy for all but 90 acres of the 2028.8 acres of land currently occupied by San Onofre State Beach since 1971. Unless renewed, this lease is set to expire in August of 2021. In the recently submitted, January 9, 2008, *Response to Coastal Commission Staff Report Released September 2007*, TCA contends that "There is no guarantee that the lease will be renewed and USMC needs for additional training facilities and area are well documented." As evidence of this, TCA notes that Major General William Bowden gave testimony to the United States House of Representatives on May 6, 2003, regarding increasing "encroachments" on the military sovereignty and use of Marine Corps Base Camp Pendleton. Major General Bowdon's testimony, while explicitly describing a wide variety of "encroachments" such as compliance with the Endangered Species Act and cultural resource protection laws, does not mention the state park leasehold.

Because CDPR is not the actual owner of most of the property within SOSB, the granting of easements and rights-of-way across this property is subject to the terms and provisions of the existing lease agreement between the property owner – the U.S. Department of the Navy and the lessee – California Department of Parks and Recreation. As described by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, the granting of rights of way for the use of a portion of San Onofre State Beach is governed by Section C of the general provisions of lease entered into by the Department of the Navy and California State Parks. Section C (Subjection to Existing and Future Easements and Rights of Way) reads, in part:

> *This lease is subject to all outstanding easements and rights of way for location of any type of facility over, across, in and upon the leased property, or any portion thereof, and to the right of the government, after consultation with lessee as to location, to grant such additional easements and rights of way over, across, in and upon the leased property as it shall determine to be in the public interest; <u>provided</u>, that any such additional easement or right of way shall be located so as not to unreasonably interfere with the use of lessee's improvements erected on the leased property; and <u>provided</u>, further, that any such additional easement or right of way shall be conditioned on the assumption by the grantee thereof of liability to*

> *lessee for such damages as lessee shall suffer for property rendered unusable on account of grantee's exercise of its rights thereunder.*

In TCA's *Consistency Certification and Analysis for Foothill Transportation Corridor – South*, TCA has interpreted the above lease agreement to mean that:

> *This lease is specifically subject to the reserved right of the United States to grant additional easements and rights-of-way over the leased property. Thus, in implementing the authority to lease, CDPR agreed that the United States could grant a right-of-way to a third party. Congress has adopted legislation authorizing the* [Department of the Navy] *to grant to the TCA an easement within this portion of MCB Camp Pendleton. Therefore, construction of* [the proposed toll road] *is consistent with the property rights associated with SOSB.*

The above statement suggests that TCA does not consider the placement and operation of the proposed toll road to unreasonably interfere with the use of the SOSB and the recreation facilities contained within the Cristianitos and Trestles Beach subunits. However, this position has been challenged by statements from the Attorney General of the State of California, the California State Park and Recreation Commission and the staff of the California Department of Parks and Recreation. In a letter dated January 5, 2006, to TCA and the Federal Highway Administration, the Attorney General states that:

> *The Attorney General remains convinced that any toll road to be built down the length of the inland portion of San Onofre State Beach, a California State Park, will significantly undermine and interfere with the State's fundamental purpose of protecting the park land, and will adversely affect the hundreds of thousands of Californians who visit the park each year for recreational purposes. Indeed, the park is known for Trestles, a world famous surfing site that is used for international competitions, as well as for its large number of camping spots with beach access. The noise pollution and visual blight caused by a busy super highway running through the park destroys its natural setting. While the toll road will not physically remove any of the 161 inland campsites, it will make them undesirable for their intended purpose, the quiet enjoyment of being away from the hustle and bustle of urbanized Southern California. San Onofre State Beach is one of the few remaining open spaces available to the general public along the coast in an area that is undergoing rapid development, including the nearby massive Rancho Mission Viejo project recently approved by the County of Orange.*

Similarly, in Resolution 66-2005, "Opposing a Proposed Tollroad Alignment and Request for Action to Protect San Onofre State Beach," adopted by the California State Park and Recreation Commission on November 18, 2005, the Park Commission found that:

> *…the loss of over 320 acres or 27% of this portion of San Onofre State Beach for a toll road right-of-way would result in the park's fragmentation, adversely affecting the remaining acreage in the park, including the potential for additional recreational opportunities, such as hiking, equestrian use and camping; and… all the sites in the popular year-round San Mateo Campground are reserved six months in advance and receive more overnight use than any other of San Onofre State Beach's two campgrounds and would be severely impacted by the noise, vibration and visual intrusion of a major roadway if it were built.*

Furthermore, in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, developed by a San Onofre Mitigation Assessment Team of CDPR staff members and consultants under contract by TCA that included the Chief Ranger and a Resource Ecologist from the Orange Coast District, a Landscape Architect from CDPR's Planning, Acquisition and Environmental Design Division, an Archeologist and Park and Recreation Specialist from CDPR's Resource Management Division, a State Park Land Officer from CDPR's Southern Service Center and a consultant environmental acoustics specialist, the following determination was made in regards to the proposed toll road's potential to interfere with existing uses of SOSB:

> *Currently, San Onofre State Beach is a rare large Southern California scenic coastal-canyon park with high environmental values, recreation use and potential for expanded recreational opportunities. Substantial impairment of these resources will result from implementation of the* [proposed toll road alternative]; that of converting [the Cristianitos subunit of SOSB] *to a strip highway corridor with scant cultural, natural, aesthetic and recreational usefulness to the State Park System. Opportunities for on-site mitigation necessary to the public for the loss of this resource are limited by the property's fragmentation resulting from project development and environmental constraints. Following review, a team of park and resource professionals recommend that if* [the Cristianitos subunit of SOSB] *is used for the Foothill Transportation Corridor-South, the majority of the inland portion of San Onofre State Beach be relinquished to the underlying property holder…*
>
> *As currently proposed, the CP alignment*[38] *will take 24.5% of* [the Cristianitos subunit of SOSB], *with an additional 5.18% to be directly impacted during the construction phase. In the opinion of CDPR, the fragmentation of* [the Cristianitos subunit of SOSB] *by the proposed highway corridor will severely restrict the use of the property for recreation purposes, as well as significantly and irrevocable alter its environmental setting, that of San Mateo Campground, and other recreational opportunities provided for in the unit's General Plan. The linear nature and split elevation of the arterial and any retaining walls,*

[38] With respect to the recreation resources of SOSB, the currently proposed toll road route does not substantially differ from the CP alignment referred to and analyzed by CDPR in this discussion.

> *soundwalls and their landscaping will reduce the site's attractiveness to the public, as well as being a wildlife barrier and a management obstacle. These unnatural and discordant visual elements will intrude upon previously open vistas, high volume noise will impose on normal recreation activities, day activities at the campground as well as night quiet, and the amphitheater campfire area will be forever altered and rendered unusable…. In summary, the irrevocable alteration of the setting of* [the Cristianitos subunit of SOSB], *and the elevated "flyway" at Basilone Road intersection to portions of* [the Trestles Beach subunit of SOSB], *significantly reduce their value as parkland. Potential activities such as environmental and equestrian camping may no longer be feasible uses…*
>
> [The San Onofre Mitigation Assessment Team] *concluded that the CP alignment will result in a take of the functional use of the majority of* [the Cristianitos subunit of SOSB] *and may have significant direct or indirect impacts to park wetland, access and visual resources of* [the Trestles Beach subunit].

The California Department of Parks and Recreation continues to support these statements through analysis conducted more recently. Specifically, the August 2004 letter from the director of CDPR to TCA states that:

> *Specifically, the campground and nature trails will become unusable for State Beach purposes with the* [proposed toll road] *alignments. State Park staff has investigated the potential for re-creating these recreation opportunities elsewhere and our knowledge of the region leads us to conclude that losses to the existing unit cannot be adequately mitigated.*

In addition, the January 10, 2006, letter from the director of CDPR to TCA states that:

> *Given that San Onofre State Beach represents the last large coastal open space recreational and habitat opportunity in Southern California, California State Parks has made it consistently clear since 1983 that an alignment through this park will have major impacts and that an alternative alignment needs to be selected.*

The specific analysis included with this letter concludes that due to unavoidable impacts associated with the acquisition of park property:

> *If a toll road alignment through SOSB is selected, California State Parks believes that with the exception of the support parking for the trail to Trestles, all of the Cristianitos Subunit #1 must be abandoned to the lessor due to the loss of values which make it of park quality and loss of revenue…*

Despite this assertion by CDPR that the Cristianitos subunit of SOSB must be abandoned if it is to be used as a toll road corridor and the claims included above regarding the significance and effects associated with the acquisition of land proposed by TCA, TCA continues to contend that the environmental analysis conducted and documented in the EIS/SEIR does not support the conclusions made by the Attorney General, the California State Park and Recreation Commission and the California Department of Parks and Recreation. This position is elaborated further in TCA's response to the statements of the Attorney General included above:

> *Section 4.25* [of the EIS/SEIR] *acknowledges that the* [proposed toll road] *alignment in SOSB would result in adverse noise, visual and short-term air quality impacts on SOSB, even with mitigation measures included in Section 4.25…*
>
> *The mitigation for the acquisition of property from SOSB does not propose "…providing suitable replacement property." The compensation for acquisition of property from any recreation resource, including SOSB, will be identified in consultation with the owner/operators as defined in mitigation measures R-3 (permanent acquisition) and R-4 (temporary acquisition) on page 4.25-30 of the Draft EIS/SEIR*[39]*. The compensation for property acquisition may include a wide range of actions, including payment or replacement for any improvements that are impaired by the project. Under the terms of the state parks lease for SOSB, there is no obligation to provide replacement lands.*

TCA also responded to the CDPR conclusion regarding the take of SOSB's functional use:

> *The conclusion of the referenced report "that the majority of the inland portion of SOSB be relinquished to the underlying property owner* [the Department of the Navy] *and substantial mitigation in the form of real property, cash and recreational related development be required from the developer and dedicated to the California Department of Parks and Recreation prior to commencement of construction" is not supported by the environmental analysis conducted and documented in the Draft EIS/SEIR.*
>
> *Consistent with NEPA and CEQA, the* [Federal Highway Administration] *and the TCA would mitigate direct and indirect impacts to SOSB. There is substantial mitigation in the Draft EIS/SEIR, related to direct and potential indirect impacts of the* [proposed toll road] *on SOSB, based on the* [proposed toll road] *alignments*

[39] Mitigation measures R-3 and R-4 contain much of the same language and read as follows: "Consistent with the requirements of the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, the TCA or implementing agency/agencies will negotiate with the owner/operator whose recreation facilities will be permanently acquired [or temporarily occupied] to determine appropriate action and/or compensation to mitigate for the permanent acquisition [or temporary occupancy]."

and existing conditions at SOSB. The impacts identified in the environmental documentation do not support a complete and total relinquishment of SOSB Cristianitos Subunit 1.

For example, impacts to property will be mitigated based on mitigation measures R-1, R-2, R-3, R-4 and R-5 in the Draft EIS/SEIR. Specifically, as stated in mitigation measure R-2:

"Measure R-2: Consultation with Owners/Operators of Recreation Resources. In conjunction with measures R-3 and R-4 (compliance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970), the TCA or implementing agency/agencies will consult with the affected property owner/operator of recreation resources temporarily used or permanently acquired by a build Alternative. The purposes of this consultation will be to:

- Identify and implement opportunities to protect recreation resources in place.
- Identify and implement opportunities to replace lost recreation facilities within the existing recreation property.
- Combine compensation and protection/modification of affected recreation resources to comply with the Uniform Relocation Assistance Act and Real Property Acquisition Act and minimize adverse impacts on recreation resources."

Mitigation for potential noise, air quality and visual impacts are also provided in the Draft EIS/SEIR to address potential adverse project impacts related to SOSB.

The CDPR will have the opportunity during negotiations, under the Uniform Act, to work with the TCA to refine the mitigation measures in the Final EIS/SEIR for the selected Alternative related to adverse impacts to SOSB. At that time, if the CDPR has feasible mitigation that it believes should be implemented, in addition to or to replace Draft EIS/SEIR mitigation measures, the discussion of those measures can be incorporated in those negotiations.

The mitigation negotiations referenced above have not occurred and additional details regarding the quantity, quality and suitability of mitigation measures that may potentially be agreed on by CDPR and TCA are therefore not available at this time. As stated above, the mitigation proposal put forward by CDPR in the August 1997, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* – "substantial mitigation in the form of real property, cash and recreational related development be required from the developer and dedicated to the California Department of Parks and Recreation prior to commencement of construction," appears to have been rejected by TCA based on a disagreement regarding the degree to which SOSB subunits 1 and 2 would be adversely affected by the construction and operation of the proposed toll road and the corresponding acquisition of park property. Furthermore, CDPR, in the January 10, 2006, letter to TCA, contends that:

> *Unfortunately, based on our experience and our knowledge of the region, California State Parks must conclude that not only can mitigation not be completed on-site due to the project itself, but that there is no longer adequate openspace coastal property to replace that which would be lost at SOSB. That was not the case in 1997,* [ten years ago]*, when several sites were recommended to TCA for consideration – an opportunity in which they neglected to invest.*

The Commission agrees with the CDPR that the adverse effects of the land acquisition associated with the proposed project would be significant and that this aspect of the project is inconsistent with the recreational resource protection policies of the Coastal Act. In recognition of the agencies' position concerning this inconsistency, TCA has proposed a mitigation package to CDPR to counteract the anticipated loss of recreation resources at SOSB due to the proposed construction and operation of the toll road. The details of this mitigation proposal have been detailed in a recent document provided to Commission staff by TCA on January 9, 2008 and include the following:

> *TCA has offered $100 million to CDPR to improve and expand recreation resources at state parks and beaches. This extraordinary offer is above and beyond the required mitigation for the project. The $100 million is available to fund all of the following protection and improvement measures as determined by the State Parks Department and the Navy:*
>
> - *Extending the SOSB lease at market value (as required by federal law);*
> - *New camp sites and other improvements at San Onofre Bluffs campground within SOSB subunit 4;*
> - *New campsites and/or improvements at nearby San Clemente State Beach to the north;*
> - *Renovation and maintenance of Crystal Cove State Park cottages north of Laguna Beach;*
> - *Improvements of additional coastal campsites, picnic facilities, and beach parking at Crystal Cove State Park's El Moro Campground; and*
> - *Restoration of 150 acres of coastal sage scrub habitat at Crystal Cove State Park.*

Although CDPR has not responded to this offer, or to the feasibility of the projects proposed by TCA for Crystal Cove State Beach, San Clemente State Beach and SOSB subunit 4, the Commission finds that the project's recreational impacts, for the reasons described above, cannot be mitigated. The Commission reiterates the statement and analysis conducted by CDPR in 2006 and included above that "that not only can mitigation not be completed on-site due to the project itself, but that there is no longer adequate openspace coastal property to replace that which would be lost at SOSB." In addition, aside from the monetary amount of funding proposed to be provided to CDPR in exchange for the loss of SOSB subunit 1 and the simple identification of sites outside of SOSB subunit 1, the specific details of the projects proposed by TCA, including the

extent of time it would take for the proposed facilities to become available to the public, the regulatory and environmental feasibility of conducting these proposed construction and restoration projects, and the likelihood that some or all of these projects would be carried out at a future date by CDPR despite TCA's current funding offer, remains unclear and undetermined. While the offer may result in benefits to the State Parks system it would clearly not mitigate this project's irreplaceable impacts.

The Commission further takes issue with one aspect of TCA's mitigation proposal, however. Specifically, the extension of the SOSB lease and the payment of market value is noted above and further clarified in the following assertion provided to Commission staff in the January 9, 2008 submittal from TCA:

> *The State Park lease expires in 2021. Any extension will require the agreement of the Department of the Navy (DoN) and will require the State to pay fair market value – funds that will not be available to the State without the project.*

The above statement by TCA does not fully disclose the provisions of the lease between the California Department of Parks and Recreation and the Department of the Navy as well as the underlying federal law that establishes the provisions of that lease - U.S. Code Title 10 Section 2667 – General Leasing Authority as it applies specifically to leases of non-excess property of military departments. Although subsection (b)(4) of this code does indeed state that a lease of military lands:

> *(b)(4) shall provide for the payment (in cash or in kind) by the lessee of consideration in an amount that is not less than the fair market value of the lease interest, as determined by the Secretary;*

Additional statutes, such as 40 U.S.C. 550(e), the Federal Property and Administrative Services Act further clarify the circumstances under which payment of fair market value would be required for the lease of federal lands and provides an exemption by stating that when federal lands are leased to a state for "public park or recreation area use," the "Secretary of the Interior shall take into consideration any benefit which has accrued or may accrue to the Government from the use of the property by the State" when determining value. In other words, federal property leased to a state for use as a park would not necessarily require the payment of fair market value by the state. Such factors should be considered in recognition of the fact that when the Department of the Navy initially granted the fifty year lease to the California Department of Parks and Recreation in 1971 for the creation of San Onofre State Beach, the State was only required to pay $1 in rent for the full 50 year term of this lease. The fair market value of the property at that time clearly exceeded one dollar. Given this precedent and the obvious public interest and public benefit provided by San Onofre State Beach, it may reasonably be assumed that the Secretary of the Navy would consider the possibility of exempting the California Department of Parks and Recreation from the obligation to pay "fair market value" to renew its lease of the San Onofre State Beach lands in 2021.

When the Department of the Navy initially granted the fifty year lease to the California Department of Parks and Recreation in 1971 for the creation of San Onofre State Beach, the State was only required to pay $1 in rent for the full 50 year term of this lease. The fair market value of the property at that time clearly exceeded one dollar. Given this precedent and the obvious public interest and public benefit provided by San Onofre State Beach, it may reasonably be assumed that the Secretary of the Navy would consider the possibility of exempting the California Department of Parks and Recreation from the obligation to pay "fair market value" to renew its lease of the San Onofre State Beach lands in 2021.

Recreation Resources within Temporarily and Permanently Occupied Land
In addition to approximately one quarter of the total land area of the Cristianitos subunit of SOSB, the specific recreation resources that exist within the coastal zone portion of the land proposed to be permanently and temporarily occupied by TCA include[40]:

- approximately 2400 feet of the Panhe Trail that provides beach access between San Mateo Campground and Trestles Beach;
- approximately 1600 feet of the Upper Trestles Trail that connects the Trestles Beach day-use parking area off of Cristianitos Road to Trestles Beach; and
- approximately one mile of the California Coastal Trail along the old Highway 101 route.

As detailed in the subsequent section on surfing resources, in addition to serving as a popular walking, jogging and bicycle route and providing a vital link between several beach access trails, the paved California Coastal Trail along the old Highway 101 route provides occasional special event overflow parking during the nine surf contests that are held at Trestles Beach each year. At all other times, the one-mile section of the California Coastal Trail/old Highway 101 route between the existing Cristianitos Road/I-5 overcrossing and the existing Basilone Road/I-5 overcrossing is closed to vehicle entry and transit (with the exception of State Parks vehicles used for public safety patrol, maintenance and resource protection).

Regarding the proposed occupation and acquisition of land currently used by the three trails listed above, TCA maintains in the March 23, 2007 *Consistency Certification and Analysis for Foothill Transportation Corridor-South* that:

> *During construction of the project, public safety of pedestrians using recreational and beach access trails in the vicinity of the project will be protected from construction of the project through temporary access detours and minimal trail*

[40] Approximate distances are based on the revised general layout plans provided by TCA in the August 2007 document, *Foothill Transportation Corridor – South (FTC-S) Roadway Description & Related Design Features in the Coastal Zone* and, where appropriate, include the proposed construction area surrounding soundwall number SW1181 that was not included in the general project footprint.

> *closures. However, beach access will always be protected, even during temporary closures.*

In the August 2007 document, *Foothill Transportation Corridor – South (FTC-S) Roadway Description & Related Design Features in the Coastal Zone,* TCA states that:

> [Secondary] *trail access from the San Mateo Campground* [and primary access from the Trestles Beach day-use parking area] *to the beach currently crosses over the Cristianitos Road overcrossing and then proceeds on the south side of I-5 down* [the old Highway 101 route] *to the beach trail. This trail* [the Upper Trestles Trail] *will remain open throughout construction.*
>
> [Primary] trail *access from the campground to the beach also exists on the north side of I-5, crossing under the San Mateo Creek Bridge. This trail* [the Panhe Trail] *will be temporarily closed to accommodate the construction and…will be relocated along the northbound side of Cristianitos Road in the form of an 8-foot sidewalk placed behind temporary concrete barrier (K-rail). Near the south end…the concrete sidewalk will again match up with the existing* [Upper Trestles Trail] *all the way to Trestles Beach. At no time during the construction of this project shall the paved Cristianitos/Old PCH*[41] *trail be closed.*

Panhe Trail

The Panhe Trail is the primary access route between the San Mateo Campground and Trestles Beach. The trail is approximately 1.5 miles in length and except for passing under I-5 and a roughly 1600 foot section that passes adjacent to the existing Cristianitos Road, it remains within undeveloped open space for most of its length. Although specific construction timelines have yet to be provided by TCA, the proposed temporary closure of the section of the Panhe Trail that exists on the inland side of I-5 and provides a link between the San Mateo Campground and the combined Panhe Trail/Upper Trestles Trail on the coastal side of I-5 is anticipated to last as long as three years. Considering the extensive amount of construction, fill and grading proposed for the area currently occupied by this trail (as shown in Exhibit 28), including the placement of over 7,500 feet of elevated bridge structures, as well as the time required to construct substantial portions of the re-routed Cristianitos Road and its adjacent eight foot wide sidewalk that is proposed to serve as the route for the re-aligned Panhe Trail, the estimate of several years appears to be appropriately conservative. In addition, in a September 7, 2007, response to Commission staff questions, TCA revealed that, "the total construction duration within the coastal zone will last approximately three years to complete." During this construction period it is unclear as to the manner in which access between the San Mateo Campground and Trestles Beach would be maintained. The current proposal (visually

[41] The trail referred to by TCA in this statement is previously described in this staff report as the combined Panhe Trail/Upper Trestles Trail and refers to the final 1700 feet of this trail that passes through the Trestles Wetland Natural Preserve between Trestles Beach and the California Coastal Trail/old highway 101 route.

represented in Exhibit 28) shows both the existing and re-aligned trail segments to be well within the project's active construction area. In describing the proposed re-alignment of Cristianitos Road and the proposed methods that will be used to maintain vehicular access along this road during construction, TCA states:

> *To the east of the Cristianitos Road/I-5 interchange, portions of Cristianitos Road within and outside the Coastal Zone will be reconstructed to accommodate the construction of the* [proposed toll road]. *During construction, Cristianitos Road will be kept open to allow access to the campground and to Camp Pendleton. There will be staging required and a temporary Cristianitos detour will be constructed. Traffic will be switched to the temporary roadway while the permanent Cristianitos Road is constructed. We anticipate there will be brief periods of traffic disruption when traffic is switched to and from the temporary road.*

Presumably, Panhe Trail access will be maintained through the nearly one mile of the construction zone during construction along the Cristianitos Road detour route. This assumption is supported by recent information from TCA, provided in a September 7, 2007, response to Commission staff comments, that states "the trail between I-5 and the San Mateo Campground will be detoured along the temporary Cristianitos Road" and that "the path will vary from 5 to 8 feet wide as space permits with a temporary concrete barrier separating it from traffic." Due to the location of this trail within the proposed construction area, TCA anticipates that "pedestrian traffic would only be interrupted for a few minutes at a time as temporary or new paths are tied in [to avoid active construction areas]." Although access between San Mateo Campground and the beach along the Panhe Trail will not be completely closed during the construction phase of the proposed project, the anticipated temporary closures of the trail as well as its passage through the proposed construction area may discourage some individuals from using it during the three year construction phase of the proposed project. No alternate trails exist or are planned to be developed between San Mateo Campground and the coast that would provide coastal access during construction that would be similar to the natural experience provided by the existing Panhe Trail. In addition, upon completion of project activities, TCA has proposed to re-align the existing Panhe Trail so that it "will run along the new Cristianitos Road, over [the toll road] and then back to its original path either under I-5 (at the San Mateo Creek) or over I-5 on the existing Cristianitos Road." As demonstrated in Exhibit 28, this re-aligned Panhe Trail would pass adjacent to, above, or below the proposed toll road for its entire length between the San Mateo Campground and I-5, representing a substantial degradation in the type and character of pedestrian experience compared to the existing situation.

Based on the three years of anticipated temporary access restrictions to be placed on the use of the Panhe Trail and the potential discouragement that users may face due to the trail's location within the proposed construction zone, as well as the permanent loss of the natural setting and character of the pedestrian experience of using the Panhe Trail, the

Commission finds that the proposed re-alignment of the Panhe Trail would significantly adversely affect the quality of the coastal access and recreation opportunities currently provided by this trail.

Upper Trestles Trail
As described previously, the Upper Trestles Trail begins at the Trestles Beach day-use parking area on the inland side of I-5 within the coastal zone near the existing Cristianitos Road/I-5 overcrossing. From this point the trail crosses I-5 on the overcrossing and continues on the coastal side of I-5 along the paved route of old Highway 101 for approximately 1400 feet before joining with the Panhe Trail and leaving the old Highway 101 route. The combined trail then passes through the Trestles Wetland Natural Preserve and ends at Trestles Beach. Joining the 110 space parking lot to Trestles Beach, the Upper Trestles Trail is one of the primary access trails for surfers and beachgoers in SOSB.

Although the majority of this trail lies outside of the proposed project footprint, TCA is proposing to construct a 1350 foot long by 16 foot high soundwall parallel to the portion of this trail that runs along the old Highway 101 route and adjacent to the Camp Pendleton officers housing area. The construction of this soundwall may conflict with its use as a recreational and beach access resource, and although TCA has committed to maintaining access on this trail throughout the construction of the proposed project, details regarding the manner in which access will be maintained during the construction of the proposed soundwall have not been provided, making an analysis of the feasibility and comprehensiveness of these protocols difficult. Accordingly, the extent to which the proposed project may adversely affect the coastal access and recreation resources provided by the Upper Trestles Trail is uncertain, and the Commission is unable, at this time, to determine the consistency of this alternative with the relevant Coastal Act policies.

California Coastal Trail
The portion of the California Coastal Trail within the project area begins at the Cristianitos Road/I-5 overcrossing and follows the old Highway 101 route parallel to I-5 through the entire Trestles Beach subunit of San Onofre State Beach. As described above, this paved trail is a popular resource for walkers, joggers and bicyclists and provides a link and access to the Panhe Trail, Upper Trestles Trail and Lower Trestles Trail beach access routes. Due to its close proximity to the beach and the Upper and Lower Trestles beach access trails, the Coastal Trail also provides special event parking during surf contests.

Several aspects of the proposed project have the potential to affect the use of the Coastal Trail. In addition to the concerns raised above for the portion of the Coastal Trail that is co-located along the Upper Trestles Trail, as shown in Exhibit 28, nearly one mile of the California Coastal Trail and the majority of its length in the Trestles Beach subunit of SOSB is within the project's disturbance area (specifically, the entire stretch of trail

between San Mateo Creek and San Onofre Creek). As noted by TCA in response to concerns raised by Commission staff about the use of this trail during construction, the construction and staging of the southbound connection between the toll road and I-5 is expected to adversely affect the California Coastal Trail:

> *Temporary access roads and equipment/material staging areas will also be required immediately adjacent to the southwest side of the SR-241 southbound connector and the northeast side of the northbound connector during the construction phase of these structures. These access strips will parallel the proposed bridges and extend approximately 40 feet from the drip line. These areas [include the Coastal Trail and] will be utilized for the 24-month period it is anticipated for construction of the connector structures.*
>
> *Of the staging/access areas mentioned above, only the one associated with construction of the SR-241 southbound connector will result in temporary impacts to publicly accessible parking areas, roads, bikeways or trails. It is anticipated that a portion of Old Highway 101 will be temporarily used at select locations during construction for access and construction materials staging areas. As indicated in the comment, Old Highway 101 is utilized for parking during special events such as surf contests. As these events are planned well in advance, the TCA will coordinate with the event sponsors and State Parks to reduce impacts on access and parking. During the period these events are occurring, every effort will be made to avoid the area and make access and parking similar to what presently exits.*

Although TCA does not elaborate on the anticipated effects to this recreational and coastal access resource, beyond the conclusion that there will be "temporary impacts to publicly accessible parking areas, roads, bikeways or trails," the statement that the areas including the Coastal Trail will be "utilized for the 24-month period it is anticipated for construction of the connector structures" suggests that effects to this trail may be lengthy. Additionally, TCA's statement that "every effort will be made to avoid the area and make access and parking similar to what presently exits" is an unclear commitment. It therefore appears that a substantial portion of the Coastal Trail may be adversely affected through the placement of equipment, materials, safety zones and staging areas and that the ingress and egress of equipment, materials and personnel may represent a substantial change in the trail's present use. The use of the Coastal Trail by TCA may limit its availability to recreation users and those using it to reach coastal access points, and will certainly affect the quality of the trail use experience during its use for construction and staging activities. Furthermore, the current proposal also includes the development of an alternate military access road to MCB Green Beach. As shown on Exhibit 28, this access road would enter the Coastal Trail at San Mateo Creek and follow it to at least the Basilone Road overcrossing area. The placement of this access road appears to overlap with roughly two-thirds of the Coastal Trail's length through the Trestles Beach subunit. Although details regarding the frequency and type of use anticipated for this access road

have not been provided by TCA, the placement of a vehicular access road along a section of the California Coastal Trail that is currently closed to vehicle traffic has the potential to preclude or degrade the quality of the existing recreational uses.

Conclusion
In addition to the general acquisition and occupancy of SOSB land that would limit the future development of recreational infrastructure and facilities and potentially cause the California Department of Parks and Recreation to abandon the San Mateo Campground and Cristianitos subunit of SOSB, the proposed project may also restrict and limit existing recreational and coastal access uses of these lands. As described above, the Commission finds that the temporary and permanent use of land currently dedicated to beach access and recreation trails is in conflict with the public access and recreation policies of the Coastal Act that specifically provide for the protection and enhancement of these recreation and access resources. The Commission therefore finds the proposed project inconsistent with the public access and recreation policies (Sections 30210-30214, 30220, and 30240(b)) of the Coastal Act.

Noise
Encompassing several miles of road and highway construction, grading and fill of tens of millions of cubic yards of soil, placement of nearly two miles of elevated road structures, and a variety of associated retaining walls, support structures, soundwalls, and over- and under-crossings, the proposed project would require the use of substantial amounts of large mechanized equipment over large areas on a continuous basis for three years. During much of this construction phase, a significant amount of noise will be generated, well above existing levels. It has been well established that the propagation of loud noise interferes with the enjoyment and well being of those individuals exposed to it. The adverse affect of elevated levels of noise on recreational pursuits has similarly been established. Accordingly, several comprehensive noise analyses have been conducted throughout the project area to quantify the anticipated sounds levels during various phases of the project, establish existing sound levels and delineate those areas most likely to be adversely affected by the construction and operation of the proposed toll road. The following discussion will describe the results of those studies in the context of coastal recreation resources.

Noise Criteria for Construction and Operation Noise
Typically, short-term noise levels from construction activities are measured against the applicable local municipality's noise ordinance to assess whether there are any noise effects. Construction activities that comply with the applicable noise ordinance are considered to result in no adverse short-term impacts while construction activities that result in noise levels that exceed the noise ordinance are considered adverse. The proposed toll road passes through the coastal zone in San Onofre State Beach and Marine Corps Base Camp Pendleton, in unincorporated San Diego County. However the San Diego County Municipal Code is not applicable to Marine Corps Base Camp Pendleton and does not contain standards that apply to campgrounds. The California Department of

Transportation (Caltrans) and the Federal Highway Administration require potential noise effects from construction activities to be assessed but do not provide any criteria for determination of impacts. However, the Federal Highway Administration has adopted noise abatement criteria for highway construction projects. These criteria have been adopted by Caltrans and are divided into five categories based on land use. The most applicable categories are included below:

Activity Category: A Hourly A-weighted Noise Level dBA L_{eq}: 57 Exterior
Description: lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its function

Activity Category: B Hourly A-weighted Noise Level dBA L_{eq}: 67 Exterior
Description: picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals

In addition, even if the predicted noise level does not approach or exceed the noise abatement criteria, traffic noise effects can occur when the 'with project' noise level substantially exceeds the existing noise levels. Caltrans has established a substantial increase to be a 12 dBA increase in the peak-hour L_{eq} noise level.

As stated by TCA in the EIS/FSEIR:

> *The FHWA/Caltrans reserve the use of Activity Category A "lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its function" and its 57 dBA Leq(h) Noise Abatement Criteria for very few and specialized circumstances. The FHWA and Caltrans do not consider the campground to fit within this category.*

The applicability of Activity Category B, as described above, to San Onofre State Beach has been a matter of disagreement between TCA and several California State agencies, including the Department of Justice and the Department of Parks and Recreation. In comments raised on the project's Draft Environmental Impact Statement both agencies state that the San Onofre State Beach should be considered as an Activity Category A area, subject to consideration with the lower of the two Noise Abatement Criteria.

Regardless of which Noise Abatement Criteria is selected however, San Onofre State Beach would experience adverse effects due to the proposed project's construction and operational noise. These adverse effects are considered in TCA's December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, which states that, "adverse noise impacts due to operation of the [proposed toll road] will occur at Tesoro High School, SOSB Cristianitos Subunit 1 and MCB Camp Pendleton San Onofre Recreation Beach" and that:

> *adverse construction noise impacts of the* [proposed toll road] *will occur at the following resources: Tesoro High School, Talega Community Park, Vista Bahia Stadium Park, San Clemente Municipal Golf Course, proposed San Clemente Neighborhood Park (east), SOSB Cristianitos Subunit 1, SOSB Trestles Subunit 2, MCB Camp Pendleton San Onofre Recreation Beach and SOSB Surfer Beach Subunit 3. These impacts indicate expected noise levels greater than 67 dBA (Leq) at these resources.* [underline added]

These anticipated operational noise effects indicate the difference between existing noise levels within SOSB Cristianitos subunit 1 (including the San Mateo Campground) of 47 dBA and projected peak hour noise levels of 58 dBA (which represents human perception of an approximate doubling of sound levels and an order of magnitude increase in absolute sound levels), despite the proposed construction of sound walls. As noted above, the adverse impacts that TCA anticipates due to construction noise would affect recreation resources within all three of the SOSB subunits. The principal causes of construction noise would be due to pile driving and the use of heavy construction equipment (graders, earthmovers, trucks, etc.) which are anticipated to result in sound levels of up to 65 decibels up to 2,800 feet away from the centerline of the proposed toll road (for reference, speech interference typically begins at 65 decibels). As stated previously, due to the amount and complexity of proposed construction within the coastal zone – including the construction of multiple elevated "flyovers," bridge structures, onramps, connectors and offramps – elevated levels of construction noise would be experienced on the majority of recreational trails within the Cristianitos and Trestles Beach subunits of SOSB for as long as three years. Recreational use of these trail areas is often specifically oriented towards achieving a natural experience and the intrusion of substantial levels of noise from human activities may substantially interfere or degrade that experience.

San Mateo Campground

Elevated construction and operational noise levels would also result in adverse effects to the recreational and low cost accommodation resources of the San Mateo Campground. The proposed toll road would be sited within approximately 200 feet of the easternmost campsites at the San Mateo Campground and within approximately 190 feet of the realigned Cristianitos Road. This portion of the proposed toll road would be elevated approximately 30 feet above the existing grade which would require the placement of a substantial amount of fill material and the use of transport trucks, graders and scrapers for an extended period of time. Although specific time estimates for this stage of construction have not been provided by TCA, the technical report titled, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, dated December 2003, estimates that groups of 15 to 30 heavy graders would require approximately 2 to 3 months to operate on a length of corridor less than one-half mile in length. It is therefore conservatively assumed that heavy grading would occur adjacent to the San Mateo Campground for between 2 and 6 months. However, it is likely that once the roadway adjacent to the campground has been graded and completed

it may continue to be used for graders, scrapers and trucks that are accessing and working on subsequent sections of the toll road. This continued use of graders and heavy equipment in close proximity of the campground would substantially extend the length of time that elevated construction noise would be experienced at the campground.

In addition, upon completion of grading activities it is assumed that construction of the actual roadbed would commence. Although heavy grading is described in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* (noise assessment) as resulting in the highest average noise levels of all construction activities due to the constant noise generated by the graders over extended periods of time, the use of dozers, loaders, trucks, pavers, and cranes during roadbed and general construction would also generate substantial amounts of elevated noise. Furthermore, pile driving operations are also proposed to occur within close proximity to the San Mateo Campground to facilitate the placement of pier structures and supports for the proposed wildlife undercrossing located approximately 900 feet from the nearest campsites at the north end of the San Mateo Campground and the elevated realigned Cristianitos Road overcrossing of the toll road. Pile driving activities are described in the noise assessment as being "responsible for very high peak or impact noise levels" approaching 105 decibels. The noise assessment also goes on to note that "for most bridges, including wildlife crossings, there are two abutments and two piers. Therefore, pile driving for the typical pier lasts roughly 4 to 6 weeks." The use of pile driving for both the wildlife crossing and the elevated portion of Cristianitos Road is therefore expected to take at least twice this long. Overall, due to the magnitude and complexity of proposed grading, roadbed, detention basin and wildlife undercrossing construction operations, it is conservatively assumed that construction activities would occur for at least one year in the area within close proximity to the San Mateo Campground.

During these activities, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* has estimated that:

- sound levels would reach approximately 100 A-weighted decibels within 50 feet of pile driving and 75 decibels within 900 feet of pile driving (during the 2-3 months of pile driving required for the wildlife under crossing and Cristianitos Road over crossing);
- sound levels would reach levels greater than 70 A-weighted decibels within 550 feet of heavy grading (during the 2-6 months of heavy grading); and
- sound levels would reach 60 A-weighted decibels during general construction activities (conservatively estimated to take an additional 6 months).

Given the proximity of the proposed wildlife crossing, detention basins, toll road and realigned Cristianitos Road to the San Mateo Campground, within 200 feet (as demonstrated in Exhibit 30) in places, a significant portion of San Mateo Campground would experience sound levels upwards of 70 decibels for between 2 and 6 months and sound levels upwards of 60 decibels for an additional 6 months during construction of the

proposed toll road. These anticipated sound levels represent an increase of between 13 and 23 decibels over the existing sound levels of 47 decibels measured at several locations within the campground. Due to the logarithmic nature of the decibel measurement system, this increase is more than one to two orders of magnitude louder (10 to 100 times louder), and in human perception terms, a more than doubling or quadrupling existing sound levels. Such a dramatic increase in sound levels in an area in which quiet and serenity are held in especially high regard would substantially alter the existing auditory environment of the campground and surrounding areas and would undoubtedly interfere with the existing use of this area. It is very likely that the use of San Mateo Campground during the construction phase of the project would be substantially diminished and its ability to function as a coastal recreation and low cost coastal accommodation resource would be degraded.

In addition to the adverse noise effects on the campground resulting from the construction of the proposed toll road, the operation of the toll road would also substantially alter the existing auditory environment at the campground. As noted above, the existing sound level at the campground has been measured on several different occasions at several different locations and has been determined to be 47 decibels on average. As specified in the noise analysis, with construction of the 16 foot high by 4000 foot long soundwall between the proposed toll road and the San Mateo Campground, sound levels within the campground have been estimated at 58 decibels during periods of peak use of the toll road. This increase of 11 decibels represents an approximate doubling of perceived sound levels, which would substantially alter the existing condition of the campground. Considering that many of the current and historic users of the campground have specifically identified the "relative quiet and seclusion" it offers as important traits,[42] this increase in sound levels is likely to substantially interfere with the present recreational use of the campground. It is especially likely that those campground users desiring to sleep in thinly insulated tents would be especially affected by the noise produced during the operation of the proposed toll road. Although it is extremely difficult to predict or estimate the number of campground users that would be discouraged from using the San Mateo Campground as a result of the presence of the toll road and its associated noise, elevated sound levels for those individuals sleeping outside could interfere with sleep and therefore discourage tent campers from using the campground.

Finally, as described previously, CDPR has asserted on several occasions that if the toll road is routed through the Cristianitos subunit of SOSB, as proposed, CDPR would abandon this portion of the park and relinquish its lease to the underlying landowner, the Department of the Navy. Recently, in a January 10, 2006, letter from CDPR director Ruth Coleman to the TCA Board of Directors, CDPR notes that "If a toll road alignment through SOSB is selected, California State Parks believes that with the exception of the

[42] Based on testimony provided at the November 3, 2005 California State Parks and Recreation Commission hearing.

support parking for the trail to Trestles, all of Cristianitos Subunit #1 must be abandoned to the lessor due to the loss of values which make it of park quality…" This statement by CDPR apparently indicates that the San Mateo Campground would be closed if the proposed project is to be built and that the entire 161 site capacity San Mateo Campground would be lost from SOSB and the park system in perpetuity. This complete loss of the campground and its recreation and accommodation resources would represent a substantial diminishment of the overall coastal recreation and visitor serving potential of the park.

Furthermore, as demonstrated in the following excerpt from the January 10, 2006, letter from CDPR director Ruth Coleman to the TCA Board of Directors, it is the opinion of CDPR that the proposed toll road route "would take over 25% of the area of the 1,200 acres Cristianitos Subunit #1 of San Onofre State Beach and nearly nine additional acres of Trestles Subunit #2 of San Onofre State Beach" and that "Such gutting of the park would forever impact the quiet, relatively isolated experience in the 1,200 acres of Cristianitos Subunit #1 and at San Mateo Campground and fragment the remainder of the park. This will cause as described in the FSEIR, significant direct and indirect impacts to park wetlands, public access, natural, cultural, recreation and visual resources." CDPR's letter and attached comments further note that "Unfortunately, based upon our experience and our knowledge of the region, California State Parks must conclude that not only can mitigation not be completed on-site due to the project itself, but that there is no longer adequate openspace coastal property to replace that which would be lost at SOSB."

Despite the location of the campground outside of the coastal zone, the fact that this campground contains important coastal recreation and low cost coastal accommodation resources that would be substantially degraded or completely lost due to the proposed development constitutes a significantly adverse and unmitigable effect on coastal zone recreational resources.

Panhe Trail

As described above, proposed construction within the coastal zone portion of the project area would result in the complete displacement and realignment of the Panhe Trail for most of its length between the San Mateo Campground and I-5. This portion of the construction process would take approximately three years and in addition to the adverse recreation and access impacts due to the temporary loss and realignment of this trail, the lengthy construction process carried out in close proximity to the Panhe Trail would result in highly elevated and potentially unsafe sound levels for those pedestrians attempting to continue using the trail during the three year construction phase. During construction, the Panhe Trail would be relocated and would pass directly through the proposed toll road construction area, likely passing within a dozen or several dozen feet of active construction equipment including graders, trucks, pile drivers, dozers, scrapers and cranes. As described in relation to the San Mateo Campground above, the use of this equipment results in highly elevated noise levels, however, due to the fact that the Panhe Trail would actually be routed through the construction zone *during construction*, it is

anticipated that trail users would be subjected to much higher sound levels than campground users.

Specifically, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* (noise analysis) states that "pile driving operations can have peak noise levels of 90 to 105 dBA at 15 meters (50 feet) with 100 dBA being typical." As shown in Exhibit 28 and described by TCA, the realigned Panhe Trail would pass directly adjacent to the realigned Cristianitos Road over crossing, an area in which pile driving activities would occur for between eight and twelve weeks, thereby placing trail users within less than 50 feet of pile driving activities and subjecting them to sound levels in excess of 100 decibels and possibly as high as 105 decibels. The Panhe Trail would also pass within close proximity to portions of the two elevated toll road "flyway" structures, each one of which would require at least six months of pile driving to complete.

The Centers for Disease Control and the National Institute of Occupational Safety and Health has found that exposure to sound levels between 103 and 106 decibels for less than five minutes may result in permanent hearing loss and damage to the human ear.[43] Depending on the location and number of simultaneous pile driving activities and the speed with which a given trail user is moving, it is not unreasonable to assume that a trail user would be within the 100 to 105 decibel range for five minutes or more.

Considering these potentially dangerous sound levels, it would seem appropriate for TCA to locate the temporary Panhe Trail well beyond the 50 foot 100 decibel sound contour. However, the realigned Panhe Trail is already located at the outer edge of proposed project's disturbance limits. Unless the project is amended to substantially expand these disturbance limits into sensitive habitat (potentially resulting in additional adverse affects to sensitive species) and re-route the Panhe Trail a greater distance from the construction areas, it appears that the Panhe Trail would remain within close proximity to pile driving and other heavy construction activities during the extensive pile driving and construction phase of the proposed project.

TCA has not submitted information to suggest that the Panhe Trail would be located a sufficient distance from construction activities to ensure that it can be safely used by pedestrians during construction. Due to the risk of hearing loss or impairment by using the trail, it can be assumed that the presence of construction activities, including pile driving, within close proximity to the proposed trail alignment would result in a de-facto closure of this coastal access trail during the approximately one year pile driving portion of the proposed construction phase. This trail closure would completely isolate all users of the San Mateo Campground (except those willing to drive a vehicle) from the coastal subunits of SOSB, as well as from Trestles and San Onofre Beaches.

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[43] National Institute of Occupational Safety and Health, Publication No. 98-126, June 1998. http://www.cdc.gov/niosh/topics/noise/abouthlp/noisemeter_flash/soundMeter_flash.html

In addition, although the use of graders, trucks, and other heavy equipment would not result in sound levels as high as those produced during pile driving activities, these activities would also produce substantially elevated sound levels and are proposed to occur within close proximity to the Panhe Trail for the majority of its length between the San Mateo Campground and the beginning of the Upper Trestles Trail. The use of this trail during the several year construction phase of the proposed project would therefore subject recreational users and those desiring to access the coast from San Mateo Campground to sound levels that are substantially higher than existing levels and would likely approach over 90 decibels.[44] While not presenting the same hearing loss risks as pile driving, these sound levels would significantly degrade the recreational experience of using the Panhe Trail and would likely discourage the use of this recreational and coastal access resource during construction of the proposed project.

Although not discussed or analyzed by TCA in the project EIS or consistency certification, the proposed demolition of nearly one mile of Cristianitos Road may also result in substantially elevated sound levels. The timing and techniques employed during demolition activities would influence the amount, duration and level of noise produced and the proximity of the temporary Panhe Trail to these activities would affect the significance and magnitude of potential impacts to recreational users of the trail. Without additional information it is difficult to adequately assess these noise impacts.

Noise levels on the realigned Panhe Trail during the operational phase of the proposed project would also be elevated above existing levels. However, the noise analysis provided by TCA does not include existing or anticipated sound levels for any portion of the Panhe Trail or adjacent areas. For much of its length the realigned Panhe Trail would be located along the realigned Cristianitos Road and/or between Cristianitos Road and the proposed toll road. Based on existing sound levels in close proximity to the I-5 freeway provided in the noise analysis, it can reasonably be assumed that sound levels on the Panhe Trail between the San Mateo Campground and I-5 would approach 70 decibels during peak traffic flow on the proposed toll road. As described for grading and general construction activities above, although these noise levels would not pose a danger to recreational users of the Panhe Trail or specifically preclude the use of this trail by recreational users, because these sound levels likely represent a substantial increase above existing sound levels along the Panhe Trail the Commission finds that the quality of the recreational experience of using this trail would be diminished.

San Onofre State Beach Subunits 2 and 3
As described in TCA's December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, adverse noise impacts are also anticipated within the coastal zone on portions of San

[44] Based on information provided in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* heavy grading operations would produce sound levels of 90 dBA at a distance of 50 feet.

Onofre State Beach subunits 2 and 3 – the Trestles Beach and San Onofre Beach subunits. Elevated sound levels would be experienced within the Trestles Beach subunit on portions of the Upper Trestles Trail, the California Coastal Trail and the Panhe Trail during both construction and operation of the proposed toll road. Increased sound levels would be experienced within the day use parking area of the San Onofre Beach subunit during both construction and operation of the proposed toll road as well.

Existing sound levels in each of these locations are anticipated to increase by approximately five decibels from roughly 66 decibels to approximately 71 decibels, four decibels above the Noise Abatement Criteria identified by Caltrans and the Federal Highway Administration. This increase will introduce additional freeway and vehicle noise upon recreational and coastal access trails and areas that already experience noise from these sources. Although the introduction of additional vehicle and freeway noise upon these coastal access and recreation trails will slightly degrade the recreational use of these resources, because of the proximity to the existing I-5 freeway and the existing noise produced by this freeway, the marginal increase produced by the toll road would not be expected to substantially degrade or limit the recreational use of these resources.

Construction activities may produce a more severe degradation of the recreational use of these areas, however. The proposed one year of pile driving that would be required for the two proposed toll road "flyover" structures (six months for each one) would produce highly elevated noise levels that would likely be experienced on portions of the Coastal Trail and Upper Trestles Trail portions of SOSB subunit 2. In addition, the activities proposed for the Basilone Road overcrossing, the nearby access road undercrossing, and the San Onofre Creek Bridge widening would also require extensive pile driving activities. Although TCA has not provided an estimate of the amount of time required for this phase of construction, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* states that "based on the experience with the San Joaquin Hills Transportation Corridor, pile driving usually lasts about 1 to 1 ½ weeks per pier or abutment. For most bridges, including wildlife crossings, there area two abutments and two piers." This information suggests that the pile driving associated with the proposed undercrossing, overcrossing and bridge widening would require three to four months to complete. The noise produced during these activities has the potential to substantially increase existing sound levels at beach portions of SOSB subunits 2 and 3 and may therefore degrade or interfere with the recreational use of these beach areas for a prolonged period of time.

TCA has not conducted an analysis of construction related noise impacts and therefore no modeling information is available to aid in determining the exact sound levels that would be experienced on these beaches during pile driving. However, the nearest of these beaches, near the mouth of San Onofre Creek, is within approximately 800 feet of the San Onofre Creek Bridge widening project area, and the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* states that pile driving noise can reach levels of 75 decibels at a distance of 900 feet. Extrapolating this

information, the Commission assumes that this beach portion of SOSB subunit 2 would experience sound levels upwards of 75 decibels for between one and several months during pile driving activities. Existing sound levels for this portion of beach have not been provided by TCA. Nearby sound monitoring conducted within a beach portion of SOSB subunit 3 recorded average levels of about 66 decibels. Due to the logarithmic nature of the decibel scale, this potential increase of 9 decibels – from 66 to 75 decibels – during construction represents close to a perceived doubling of sound levels. The Commission finds that such sound levels, especially when produced in concussive intervals by a pile driver, would substantially degrade the recreational opportunities and experiences provided by the beach at which they are received. Similar sound levels may also be experienced by beaches within SOSB subunit 3 during construction.

Mitigation
TCA has not provided the Commission staff with an analysis of the magnitude and extent of construction related noise impacts, beyond the simple description of activities and the noise levels that they can reasonably be expected to produce that is included in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* referenced repeatedly above. In the project EIS TCA contends that "the potential for noise related construction impacts is not refined at this time because detailed construction phasing and programs for the individual build Alternatives have not been fully developed." However, TCA has proposed several mitigation measures to address anticipated construction related adverse noise impacts. As detailed below, TCA has also committed to several measures to offset or minimize operational noise impacts. Noise related mitigation measures are included and discussed below:

> *Measure N-1. Local Control of Construction Hours. …Any project construction activities planned between 7:00 PM and 7:00 AM on MCB Camp Pendleton will require approval from the TCA in consultation with the Commanding General of Camp Pendleton. For any portion of this project that may be constructed on MCB Camp Pendleton in San Diego County (outside the area of jurisdiction of the Orange County Noise Ordinance or outside the area of jurisdiction of San Clemente's Noise Ordinance), approval of the planned hours of construction, including any need to perform nighttime pile driving, will rest solely with the Commanding General of Camp Pendleton.* [only the applicable portions of this measure are included above]

It is the understanding of the Commission that it is neither the duty nor obligation of the Commanding General of Camp Pendleton to consider or reduce potential construction related noise impacts on the recreational use of SOSB. Accordingly, providing the Commanding General of Camp Pendleton with approval authority of construction hours and nighttime pile driving activities would not ensure that adverse impacts to recreational resources within SOSB as a result of project related noise would be avoided or minimized. Therefore, this measure may not provide any direct mitigation to the noise related adverse impacts to the recreation resources discussed above.

> *Measure N-2. Construction Equipment. During construction activities, the construction contractor will ensure that the construction vehicles and equipment shall be maintained properly in tune as required by local ordinances. Additionally, each internal combustion engine used on the job shall be equipped with a "residential" or "hospital" grade muffler.*

The degree to which this measure would reduce noise levels produced by construction equipment is not clearly defined. Furthermore, as discussed above, the primary noise impacts associated with the proposed project would result from the action of pile driving and heavy grading and not necessarily from the engines of the equipment conducting these activities. Therefore, it is unclear how much, if any, sound reduction can reasonably be expected from this mitigation measure.

> *Measure N-3. Schools Adjacent to Construction Zone. Prior to construction activities in the vicinity of any school, the construction contractor shall be responsible for developing an agreement with Capistrano Unified School District, Camp Pendleton and private school operators as appropriate, that would mitigate construction noise levels in classrooms and playfields at the affected schools to an agreed to construction noise performance standard. Each agreement shall be completed prior to the initiation of any grading on construction within 600 m (2,000 ft) of the school grounds. Examples of noise mitigation options include construction of temporary soundwalls, and limitation of some of the noisiest construction activities to periods when the schools are closed (e.g., the summer for the two public schools).*

Although this measure may provide a reduction in noise levels for school facilities it does not include recreational or park facilities and would therefore not minimize or offset noise impacts to these resources. It should be noted that the only school-type facility located within the coastal zone portion of the project area is the San Onofre Child Development Center, located on MCB Camp Pendleton directly adjacent to the proposed Basilone Road overcrossing, the proposed access road undercrossing, the proposed Camp Pendleton San Onofre Gate, the proposed toll road northbound connector to I-5 and the proposed San Onofre Creek Bridge widening. The proposed construction of these areas would require extensive pile driving and general construction. As described in the mitigation measure above, "some of the noisiest construction activities" in these areas would be limited to periods when schools are closed – presumably during the evening, weekend and summer periods. The concentration of noisy construction and pile driving activities during these periods, also periods of peak recreational beach use, may result in adverse recreational impacts to those recreational users within the southern end of Trestles subunit of SOSB.

> *Measure N-4. Haul Routes. Prior to construction activities, the construction contractor shall establish haul routes that avoid passing through or adjacent to*

> *residential and school areas to the extent feasible. In general, truck routes should be directed away from residential areas and onto the I-5 to minimize the construction truck intrusion. If haul routes must pass through residential areas, haul route traffic should be limited to daytime hours (7 AM to 8 PM). The haul routes will be developed in conjunction with the applicable local jurisdictions.*

This measure is directed specifically at residential areas and schools and presumably does not apply to the public access and recreation resources within SOSB, including the San Mateo Campground. This measure therefore provides no guarantee to positive noise impact reduction for recreational and coastal access resources within SOSB.

> *Measure N-6. Noise Complaint Officer. Prior to construction activities, the construction contractor shall identify a Noise Complaint Officer and establish a Noise Complaint hotline. The Noise Complaint Hotline shall be able to receive calls on a 24 hour basis. Any complaints regarding construction shall be forwarded to the Noise Complaint Officer. The Noise Complaint Officer shall record the general description of the complaint, the time the offending noise occurred and the location of the complaint. The Officer shall attempt to measure the noise that generated the complaint within the following 24 hours. If the noise levels exceed those allowed during nighttime construction activities under the local Noise Ordinance, or activities are occurring that are inconsistent with the noise mitigation measures, then the construction contractor shall be responsible for correcting those problems within the following 48 hours. The noise levels measured and any corrective actions shall be recorded with the original complaint form.*

Because there is apparently no applicable local noise ordinance for activities proposed to occur within the SOSB leasehold of MCB Camp Pendleton, it is unclear if this mitigation measure would be relevant for the portion of the project area within the coastal zone. In addition, the potential effectiveness of this measure appears fairly uncertain due to the fact that activities that would generate complaints may not continue long enough to enable the noise officer to measure them. Apparently, if noises occur, generate complaints, and the noise officer is not able to measure them than no corrective measures would be taken. The effectiveness of this measure to reduce noise impacts to recreational and coastal access resources remains unproven and uncertain.

> *Measure N-7. Final Noise Analysis. During final design of the selected Alternative, the TCA or the implementing agency/agencies will prepare a final noise analysis based on the detailed and finalized design developed during final design for the selected Alternative. Feasibility considerations for each sound barrier must meet FHWA/Caltrans criteria including a minimum of 5 dB of noise reduction at the impacted receiver. Additional feasibility considerations are (1) topography, (2) access requirements for driveways, ramps, etc; (3) the presence of cross streets, (4) other noise sources in the area and (5) safety considerations.*

> *The TCA or the implementing agency/agencies will finalize noise mitigation requirements for the selected Alternative and coordinate design with the local agency. As appropriate, the Final Noise Assessment Technical Report and the sound barrier/berm height recommended in the Final Noise Assessment Technical Report will serve as a guideline in determining the final barrier height requirements. Other pertinent information from the Final Noise Assessment Technical Report will be incorporated into final design as appropriate. The Final Noise Assessment Technical Report will provide specific recommendations that will then be incorporated into the Construction documentation (i.e., final design) for building purposes.*

Although the implementation of this measure may reduce and minimize project related noise impacts, the Final Noise Analysis has not been developed and has therefore not been provided to Commission staff for review. Therefore it is difficult to accurately assess the potential for this measure to provide a substantive reduction in project related noise impacts.

> *Measure N-8. Long-Term Noise Impacts. During construction, the TCA or the implementing agency/agencies shall implement permanent sound barriers, including walls, berms or combinations of walls and berms. The sound barrier and/or supplemental berm must provide a minimum of 5 dB of noise reduction at the impacted receiver as refined during final design. The locations of these proposed sound barrier/berms are shown on Figures by Alternative in Appendix K. The construction contractor will be responsible for constructing the sound barrier/berm for the selected Alternative and as refined during final design. The design and specifications of the sound walls, shown on Figures 5.2-79 through 5.2-82 (Appendix H of the EIS/SEIR), on MCB Camp Pendleton shall be approved by the Commanding General of Camp Pendleton.*

The placement of sound barriers and sound walls has been described by TCA in the project EIS and consistency certification and much of the analysis of the proposed project's operational noise impacts rely on the placement of soundwalls to reduce the sound levels at sensitive receptor sites, such as the San Mateo Campground. The placement of soundwalls, while anticipated to reduce the level of vehicle and traffic noise produced by the toll road in certain areas, would not provide a positive sound reduction during construction activities. This mitigation measure would therefore not reduce or offset the adverse affects of project construction noise described above. Furthermore, as described in the document titled, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, even with the addition of a 16 foot high by 4000 foot long soundwall along the portion of the toll road route that is adjacent to the San Mateo Campground, this coastal accommodation and recreation area would still experience sound levels that would be perceived as roughly twice as loud as existing sound levels. These "mitigated" sound levels would still be high enough to interfere with sleep and recreational enjoyment of this camping facility.

> *Commitment NC-1. Determination of Reasonableness. During final design, the TCA or the implementing agency/agencies shall determine the reasonableness of soundwall/berm placement and consider the life cycle of the sound barrier, the potential environmental impact of the mitigation, opinions of impacted residents, input from the public and local agencies, and social, economic and environmental factors consistent with the FHWA/Caltrans feasibility criteria.*
>
> *Commitment NC-2. Soundwall/Floodplain. During final design, if the TCA or the implementing agency/agencies locates a soundwall/berm in a floodplain, the TCA or the implementing agency/agencies shall prepare an evaluation of the effects of the soundwall on the floodplain in accordance with appropriate guidelines and design manuals. The design and location will be determined to ensure there is no exceedance of the one foot elevation of the base floodplain. Early recognition and analysis of potential problem areas will be made to determine if wall openings or staggered wall openings are viable for those barriers.*

Because TCA has not completed its analysis of whether the proposed sound walls can be constructed consistent with floodplain requirements, the Commission cannot even be assured they will be fully implemented.

Conclusion
The adverse effects of project related construction and operational noise on the coastal recreation and access resources within the project area would be substantial. Such effects may include the de-facto closure of the coastal access Panhe Trail, the abandonment or severely limited use of the San Mateo Campground, and the interference and degradation of the recreational use of SOSB subunits 2 and 3 – Trestles Beach and San Onofre Beach. The Commission therefore finds that the elevated and prolonged sound levels resulting from the proposed project would result in substantial reductions in the availability of public access and the severe degradation of the quality of the coastal recreation and access resources at SOSB. The Commission therefore finds the proposed project inconsistent with the public access and recreation policies (Sections 30210-30214, 30220, and 30240(b)) of the Coastal Act.

Public Views
Because the Coastal Act's policy regarding consideration and protection of the scenic and visual qualities of coastal areas supports the quality and quantity of the recreational use of those areas, the proposed project's potential effects on the existing viewsheds and visual characteristics of the coastal zone portion of the project area will be considered in this section.

The existing condition of the project area is defined primarily by two features, the existing I-5 freeway corridor and the undeveloped natural areas and open space of San Mateo Canyon and San Onofre State Beach. As one of the few remaining rural coastal

canyons within the southern California region, San Mateo Canyon (including the Cristianitos and Trestles Beach subunits of SOSB) is characterized by an abundance of views of natural coastal and upland areas that are largely devoid of human development – a condition that is singularly unique throughout the region. In particular, the views and visual qualities surrounding the San Mateo Campground, Trestles Beach and the Panhe, Upper Trestles and Coastal Trails are valued throughout the region due to the amount, quality and diversity of ecological communities that are represented in these areas as well as the large panoramic views of the Pacific Ocean and San Mateo Canyon's large rural and natural landscapes. As described by CDPR in the August 1997, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, the high visual quality of this region is considered to be one of the key assets of San Onofre State Beach and contribute substantially to its "spirit of place."

The proposed construction and placement of an additional four lane elevated freeway in this area would represent a substantial transformation of this existing condition.

In the visual impact analysis conducted by TCA as part of the proposed project's environmental review, a variety of Key Observation Points were selected to demonstrate the proposed toll road's effect on the existing viewshed. In addition, in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* produced by CDPR, additional visual simulations were produced. These projections and simulations are provided as Exhibit 31. As these simulations demonstrate, the presence of the proposed toll road would substantially degrade the scenic and visual qualities of a variety of the coastal areas within the coastal zone portion of the project area, as well as those of several of the coastal recreation resources located outside of the coastal zone within the Cristianitos subunit of SOSB.

Panhe Trail

The Panhe Trail provides coastal access between Trestles Beach and the San Mateo Campground and passes primarily through relatively intact open space outside of the immediate vicinity of roads or buildings for approximately 80% of the one and a half mile length. Views along this trail include rare coastal sage scrub plant and animal communities, undeveloped hillsides, riparian areas, and San Mateo Creek and culminate in the open sandy areas of Trestles Beach. Although a portion of this route parallels Cristianitos Road for a short distance and passes beneath the I-5 bridge over San Mateo Creek, it nonetheless provides a visual experience of how this coastal canyon appeared historically – a unique quality in the highly developed coastal areas of southern California. Use of this trail and the natural setting that surrounds it has been described as an important aspect of the overall experience of surfing at the world famous surf breaks of Upper and Lower Trestles.

The proposed project includes plans to re-route nearly the entire length of this trail on the inland side of I-5, first by diverting it along the temporarily re-aligned Cristianitos Road

through the construction area of the proposed toll road during the approximately three year construction phase of the project, and then along the permanently realigned Cristianitos Road and adjacent to or below the proposed toll road during the operational phase of the proposed project. Each of these proposed routes for the Panhe Trail would significantly degrade the visual experience of using this trail.

As described above, existing views along the inland portion of the Panhe Trail primarily include open natural areas and intact habitat. Unique among the trails that exist within SOSB, the Panhe Trail provides users with the opportunity to pass within and through nearly the full range of ecosystems and natural communities represented within SOSB, including dry upland, coastal sage scrub, riparian, coastal and sandy beach areas. By providing a trail link between the inland and coastal subunits of SOSB, the Panhe Trail allows users to fully experience the visual and natural transition between these subunits and the habitats that characterize them. Although TCA has not provided Commission staff with any visual simulations or analyses depicting the proposed realignment of the Panhe Trail compared to the existing alignment, based on the trail location representation demonstrated in Exhibit 28 as well as engineering schematics it is clear that the proposed trail alignment would be dominated by views of the proposed toll road. Indeed, by passing on each side, above and below the proposed toll road, the realigned Panhe Trail would include views of the toll road from nearly every possible angle. The realigned Panhe Trail would remain adjacent to and within immediate view of the toll road for its entire inland extent. The Panhe Trail would pass to the east of the toll road after departing the San Mateo Campground, join with the realigned Cristianitos Road to begin the climb to the toll road's elevated road bed, pass over the toll road along the proposed Cristianitos Road overcrossing, continue along the realigned Crisistianitos Road and between Cristianitos Road and the toll road on the west side, and finally follow below the elevated toll road before passing below I-5. On the coastal side of I-5 the Panhe Trail would resume its original, unaltered route to the coast.

While traversing above, below and between the toll road, views along the Panhe Trail would not be characterized by natural landscapes and scenic coastal areas but would instead be comprised of a close up examination of freeway engineering and reinforced concrete construction. This radical change in the Panhe Trail's alignment and the dominating presence of the toll road would transform what was once a scenic coastal viewshed into a highly engineered, developed and altered landscape.
Use of the Panhe Trail during the three year construction phase of the proposed project would subject park visitors to an even more radically altered and degraded viewshed. The proposed project involves the use of hundreds of pieces of heavy equipment, massive amounts of vegetation clearing, grading and landform alteration. The construction area within the project's disturbance limits would be especially degraded during construction and views would be dominated by ongoing activities, staging areas, and cleared, deformed land. The proposed route of the Panhe Trail during construction would be located directly within these disturbance limits, adjacent to the temporarily realigned Cristianitos Road and in close proximity to the demolition of the existing Cristianitos

Road and the construction of the toll road and the realigned Cristianitos Road, resulting in adverse affects to the previous scenic coastal views provided by this trail during construction.

California Coastal Trail and Upper Trestles Trail
Within the coastal zone, the visual character of the majority of the California Coastal Trail segment that passes through the Trestles Beach subunit of SOSB would be permanently altered (including that portion of the Coastal Trail that is combined with the Upper Trestles Trail). Although this trail currently parallels the I-5 freeway corridor, views of the existing freeway are limited by the relative elevation of the trail and freeway, the presence of vegetation and visual screening and the small buffer area between the trail and freeway. Currently, the California Coastal Trail is below the grade of I-5 for most of its length through the project area and aside from occasional views of large trucks in the southbound "slow" lane, the freeway's presence is not always visible. This situation would be substantially changed by the presence of the southbound connector of the proposed toll road, however. This elevated structure, passing up approximately 20 feet above the existing I-5 freeway, will occupy a substantial portion of the vegetated buffer area between I-5 and the Coastal Trail and will be readily visible from the Coastal Trail for the majority of its length between Cristianitos Road and Basilone Road. Although TCA has yet to provide Commission staff with visual simulations of the toll road from the Coastal Trail, engineering schematics and simulated views from nearby observation points suggest that the toll road would substantially intrude upon the viewshed of the Coastal Trail and alter the visual character of this area from one dominated by natural views and open space to one dominated by an elevated freeway structure.

Trestles Beach
Similarly, inland views from the Trestles Beach subunit would also be altered by the presence of the proposed toll road. While the existing elevation of the I-5 freeway does not make it visible from the beach and ocean, as shown in Exhibits 32 – the visual simulations provided by TCA and included in the project EIS/SEIR, because the proposed toll road would be elevated up to 20 feet above the existing I-5 freeway for much of the length of the connection between these two freeways, the proposed toll road would be visible from the ocean and beach. The proposed toll road would therefore alter the character of the San Mateo Valley – as seen from the beach and ocean looking inland – from one with almost no evidence of human development to one in which the proposed freeway would be clearly visible as it horizontally bisects San Onofre State Beach above the canopy of existing vegetation. *TCA's Response to CCC Report* disagrees with Commission analysis and the visual simulations previously provided in the project EIS/SEIR (and included as Exhibit 32 of the Staff report) by variously stating that:

> *The Staff Report exaggerates the visual impacts of the proposed project on the views from Trestles Beach. As demonstrated in the additional view simulations 1*

> *through 4 in Attachment 15, the proposed alignment would not be visible from Trestles Beach.*

And:

> *The project would not be visible from Trestles Beach because existing topography and vegetation would block all views of the proposed alignment from the Trestles Beach area and the alignment would not be close enough to be visible from the beach.*

The additional visual simulations recently provided by TCA, modeled from four observation points on Trestles Beach that are different from those used in the visual simulations previously provided by TCA and included in the project EIS/SEIR, do not indicate that the proposed toll road would be visible from these portions of Trestles Beach. However, as those visual simulations provided in the project EIS/SEIR as Figures 5.8-3, 5.8-4, 5.8-5 and 5.8-6 (and included as Exhibit 32 of this report) indicate, the proposed project would clearly be visible from portions of Trestles Beach and adjacent waters. Accordingly, the Commission disagrees with TCA's assertion that "the proposed alignment would not be visible from Trestles Beach" but clarifies that the proposed project would not result in adverse visual impacts to *all* locations on Trestles Beach.

San Mateo Campground
Although located outside of the coastal zone, the placement of the proposed toll road, its associated 4,000 foot long by 16 foot high soundwall, and the realigned Cristianitos Road adjacent to and within approximately 200 feet of the San Mateo Campground would severely alter the visual character of this area and would have the potential to adversely affect the campground's ability to function as a coastal recreation and low cost visitor serving resource. As demonstrated in Exhibit 31, the existing views from the campground and outdoor education center are dominated by the 403 foot tall Pocket Mouse Hill and adjacent undeveloped hillsides that comprise the border between the County of San Diego and the City of San Clemente. As described by CDPR in a January 10, 2006, comment letter to TCA:

> *San Mateo Campground sits in an undeveloped coastal canyon along San Mateo Creek. Interstate-5 is approximately 0.7 miles (3700 feet) south of the campground and barely visible to campground patrons. This location provides for a quiet and relatively isolated camping experience in one of the few remaining large coastal open space recreation areas in Southern California.*

The proposed toll road and its associated development would substantially alter the visual character of the campground and surrounding areas. The proposed toll road would be raised high above the grade of the existing Cristianitos Road on a small hillside of fill material and would be bordered on the campground side by the 4000 foot long by 16 foot high soundwall that has been proposed to reduce anticipated traffic noise levels. As

shown in Exhibit 31, the campground's visual backdrop would be altered from one of open natural landscapes to one dominated by the toll road, soundwall and realigned Cristianitos Road. TCA confirms that this change would significantly degrade the visual character of the campground:

> *…the project will obscure most of the hill which is the dominant component of the existing conditions view. The intactness of this view will change… because the road embankment is so close to the campground that it will become a prominent feature in the view instead of the hill and the retaining wall and guard rail will contribute urban features to the view which is currently largely undeveloped. The unity of the visual elements will change… because the plane of the fill slopes and straight lines of the edge of the retaining wall and the edge of the toll road surface will substantially interrupt the existing curvilinear patterns of the view. The overall visual rating would change from moderately high (rated 5) to moderately low (3 + 3 + 3 = 9, 9/3 = 3). This change of two rating points in visual quality would be a substantial adverse impact on the sensitive viewers in SOSB, especially at the Campground.*

This "substantial adverse impact" that TCA describes can reasonably be expected to reduce the popularity and overall use of the San Mateo Campground and therefore has the potential to adversely affect the coastal recreation resources and services provided by both the campground and SOSB as a whole. CDPR has stressed this point in a number of written comment letters and reports to TCA over the past decade. The most recent of these correspondences, dated January 10, 2006, describes both the anticipated visual effects of the proposed project on the San Mateo Campground as well as the consequences of these visual alterations on the use and function of the campground and park:

> *…locating a multi-lane, limited access highway within a few hundred feet of a secluded campground will so destroy the recreational value of the campground and sense of place as to render it valueless. Moreover, the impacts of fragmentation on Cristianitos Subunit #1, fragmentation recognized by the FSEIR, will likely result in the necessity of abandonment of the subunit as a component of the California State Parks system. There is no substantial evidence in the record to suggest otherwise…*
>
> *It appears that the nearest campsite to the toll road will be within 200 feet… Construction of the project will include a 16 foot soundwall. Between the soundwall and the campground, the re-routed Cristianitos Road will be as close as 190 feet to the nearest campsite.*
>
> *This will irrevocably destroy the sense of place and camping experience at San Mateo Campground. It calls into question the viability of the campground and, indeed, the viability of the entire subunit. The linear nature and split elevation of*

> *the arterial, its cut-banks, fills, retaining walls, soundwalls and their landscaping will reduce the site's attractiveness to the public, as well as creating a potential wildlife barrier and park management obstacle. This configuration decreases the recreational value to the public by introducing totally unnatural and discordant visual elements intruding upon previously open vistas, eliminating natural trail corridors, and other recreational opportunities and excludes potential park activities such as environmental and equestrian camping.*

This letter also goes on to note that based on testimony of San Mateo Campground users presented at the November 3, 2005, California State Parks and Recreation Commission hearing:

> *People who use San Mateo Campground do so because of its relative quiet and seclusion. They do not go camping to be next to a multi-lane highway and have their views truncated by a 16' high soundwall.*

Overall, due to the incompatibility of the proposed project's anticipated visual and landform alterations with the existing use of the San Mateo Campground and the requirements of the campground's users, CDPR states, "California State Parks staff, based on its experience in operating and managing parks, believes that result of these impacts will be the eventual loss of San Mateo Campground." CDPR further asserts:

> *If a toll road alignment through SOSB is selected, California State Parks believes that with the exception of the support parking for the trail to Trestles, all of Cristianitos Subunit #1 must be abandoned to the lessor due to the loss of values which make it of park quality and loss of revenue (for which TCA asserts it owes no compensation).*

Although it would not physically displace significant campground elements[45] or sites, the proposed project would alter the visual qualities and characteristics of the area surrounding the San Mateo Campground to such a degree as to result in the loss of the area's recreational value and the degradation of the entire park. As TCA acknowledges in the project EIS:

> *The alignment through* [SOSB] *would conflict with the policies and goals of SOSB. As described in Section 4.18.1, the SOSB General Plan identifies scenic resources including geomorphic features and vegetation to be of great importance and it is SOSB policy to protect these resources from all degrading and undesirable intrusions. The removal of vegetation, including sage scrub, and the cut and fill alterations of the landform in SOSB would conflict with this policy. Partial view blockages would occur for westbound drivers on Cristianitos Road*

[45] Both TCA and CDPR anticipate that the proposed toll road alignment would necessitate the removal of a maintenance yard and pump station.

> *in SOSB. The alignment through* [SOSB] *would conflict with the SOSB General Plan policies and goals. The blockage of views from Cristianitos Road in SOSB would conflict with this policy. Therefore, implementation of the project along* [SOSB] *would have a substantial adverse impact related to adopted SOSB policies and plans.*

I-5 Scenic Highway Corridor
The 21 mile stretch of I-5 from the City of Oceanside city limits north to the Orange County line (including all portions of I-5 in the project area) has been recognized by the Scenic Highway Element of the San Diego County General Plan as a priority for scenic highway designation. This priority status was given in recognition of the high visual quality of the area traversed by the route and in consideration of one or more of the following selection criteria:

- *Routes traversing and providing access to major recreation, scenic or historic resources;*
- *Routes traversing lands under the jurisdiction of public agencies;*
- *Routes supported by significant local community interest;*
- *Routes offering unique opportunities for the protection and enhancement of scenic recreational and historical resources.*

The scenic highway designation is intended to "preserve and protect scenic highway corridors from change that would diminish the aesthetic value of adjacent lands" and "protect and enhance the County's "scenic, historic, and recreational resources" within the viewshed of all scenic highway corridors" by limiting and minimizing projects or activities that would result in adverse effects to visual resources. In the recently completed *Guidelines for Determining Significance – Visual Resources*, the County of San Diego has determined that:

> *Typical adverse effects on visual resources in the unincorporated portion of the County may be caused by any of the following, or others, either temporarily or permanently:*
> • *Altered landforms (i.e., cutting down hills and mesa tops, filling in canyons, encroaching on steep slopes, creating extensive cut or fill slopes, flattening of any topographic feature);*
> • *Incompatible design features;*
> • *Incompatible uses;*
> • *Noise and retaining walls;*
> • *Vegetation clearing;*
> • *Insensitive siting; and/or*
> • *Grading that does not modify landform to a noticeable level once it is vegetated (i.e., remedial grading* [cut and fill] *beyond pads to be revegetated with native plants).*

Construction and operation of the proposed project would involve the majority or all of the activities described above and would substantially alter the character and quality of existing views from I-5 throughout the project area. TCA acknowledges the priority scenic highway designation of I-5 in the project area as well as the proposed project's potential to adversely affect views from I-5 in the project EIS:

> *The County of San Diego has designated I-5 from the City of Oceanside city limits north to the Orange County border as a Scenic Route. The County identifies any physical change which will substantially affect the viewshed of a designated scenic highway to have a significant visual effect on the highway. Implementation of the connector ramps that cross I-5 will introduce a long elevated structure to the views of the densely vegetated San Mateo Creek area and the agricultural fields north of I-5. The connector ramps will be in the foreground view of motorists and would substantially and adversely change the viewshed to the northeast. The southern part of the connector ramps will also obstruct ocean views for motorists on I-5. Therefore, implementation of the project along the south part of* [the project area] *would have a substantial adverse impact related to adopted policies and plans of San Diego County.*

As described above, the proposed project would obstruct ocean, riparian and open space views along a priority scenic highway corridor and introduce incompatible visual elements to the viewshed throughout the project area. Although TCA has not provided Commission staff with visual simulations of the altered views from I-5 during the construction and operational phases of the proposed project, the analysis provide above as well as schematic renderings of the toll road suggest that those portions of I-5 in the project area would experience adverse visual impacts.

Night Lighting
In the project EIS, TCA describes the operational lighting requirements of the proposed toll road by stating that:

> *There will be light and glare impacts associated with the* [proposed toll road] *and these impacts will occur under all the build Alternatives. For the corridor Alternatives, toll collection plazas and their lanes and ramps will be continuously lit. The mainline corridor will not be continuously lit…These new sources or new locations of light have the potential to spill onto adjacent land uses. These light and glare impacts would be substantially adverse prior to mitigation.*

Although TCA identifies spillover light as a source of substantially adverse effects in and around the lighted portions of the toll road route, there are no proposed toll collection plazas located within the coastal zone portion of the project area and, as stated above, the toll road itself would not be continuously lit during operation. The proposed toll road would require lighting within the coastal zone at the north-to-north connector and the south-to-south connector, and at the Cristianitos and Basilone interchanges.

TCA has recently amended its project description to clarify that night lighting would be used on sections of the proposed toll road within the coastal zone portion of the project area. Specifically, TCA noted on page 154 of the *Redlined Errata version of the Commission's September 2007 Staff Report and Recommendation* (provided to Commission staff on December 27, 2007) that:

> *For safety reasons and in compliance with Caltrans safety standards, the connector ramps and interchanges will be lit. The proposed toll road would require lighting within the coastal zone at the north-to-north connector and the south-to-south connector, and at the Cristianitos and Basilone interchanges.*

This new information contradicts information previously submitted to the Commission by TCA as well as the information contained within the project EIS/SEIR which did not describe project lighting within the coastal zone. The lighting requirements described above by TCA would likely result in additional adverse visual impacts to the coastal viewshed. It is difficult to determine the magnitude and severity of these impacts due to the lack of visual simulations demonstrating the specific location, height, intensity, color and number of these lights. However, considering both the current unlit baseline of the project area as well as the fact that the lights would be included on some of the highest and most visually intrusive aspects of the proposed project, the elevated connector structures, it is assumed that these lights and possibly their associated support structures will be visible from distant locations including Trestles Beach as well as nearby areas including the San Mateo Campground. Although TCA has proposed to mitigate the amount of "spillover light" resulting from these street lights through a commitment (described in Measure AS-4) to not allow "any surface of the right-of-way" to be illuminated "greater than 1/10 of the road's average horizontal illuminance," the manner in which this would be achieved has not been described. It is therefore difficult for the Commission to make a determination regarding this mitigation measure's potential for success.

While it is likely that spillover light would result from the use of vehicles on the proposed toll road, visual simulations or descriptions of this potential source of spillover light have not been provided by TCA. Analysis of the extent and magnitude of this potential adverse affect is therefore extremely difficult. In addition, the use of construction lighting during the approximately three years of proposed construction within the coastal zone was not included in the analysis provided by TCA in the project EIS or the consistency certification. Several of the construction phases of the proposed project will require the use of substantial amounts of lighting on a continuous basis during the nighttime hours. The presence of this lighting in an area otherwise characterized by its rural setting and lack of development (including lighting) would result in a substantial change in the existing visual condition. The continuous or periodic use of this lighting for as long as several years would result in adverse effects to the visual resources in the project area by substantially altering what would otherwise be an area of little or no

illumination. The magnitude of this adverse impact is difficult to determine however, due to the lack of information provided by TCA in regards to night lighting during construction.

Construction
In addition to the recognized and anticipated adverse effects to visual resources throughout the project area as a result of the final build-out of the proposed toll road, the lengthy construction phase of the project is anticipated to result in a variety of impacts to visual resources as well. Many of these activities and the impacts associated with them are described in the recreation section above in additional detail. The use of staging areas and construction sites as well as the clearing of vegetation, construction of access roads, grading and fill of up to 45 million cubic yards of soil, and the production of substantial amount of dust for approximately three years would substantially degrade the existing visual condition of the 138 acres of the project area located within the coastal zone. The disturbance and construction activities within this area would affect those recreational users of the Cristianitos subunit of SOSB most severely by dramatically increasing the amount of cleared land and transforming an area previously characterized by its rural natural setting into a beehive of heavy construction activities. In addition, as described previously, the use of the California Coastal Trail for staging and construction equipment access would also adversely affect the visual resources of the Trestles Beach subunit of SOSB by greatly increasing the amount of construction equipment and cleared vegetation in an area otherwise defined by its natural features and access trails. Furthermore, although the actual construction phase of the proposed project is anticipated to last approximately three years, it is likely that several more years will elapse before the process of re-vegetation overcomes the amount of cleared and denuded soil within the project's disturbance limits. During that period of re-growth, the disturbed area within the project footprint would continue to bear the visual scars of construction and the visual resources of this area would remain in a degraded state. Overall, due to the length of time required for construction to be completed and its effects to be concealed, four to five years conservatively, the Commission finds that although regarded as temporary by TCA, the effects of construction of the visual resources of the coastal zone portion of the project area would be substantially adverse.

Landform Alteration and Alternatives
The proposed project would require 1.4 million cubic yards of cut and fill material within the 138 acres of land within the coastal zone portion of project footprint. This material would be required to elevate the toll road through the Cristianitos subunit of SOSB and provide a level, elevated plane on which to place the roadbed. Additional cut and fill would also be required to carve the proposed route through the hills and valleys that characterize the eastern edge of the San Mateo Canyon as well as to provide the leveling and smoothing of adjacent landforms as described in mitigation measure AS-1, below. As required under Coastal Act Section 30251, "permitted development shall be sited and designed to…minimize the alteration of natural land forms." Of the 15 alternative toll road routes for which TCA has provided project-wide landform alteration information,

the proposed project would require more cut material than all but three other alternatives, more fill material than all but four other alternatives and more remedial fill material than all but seven other alternatives. Given the fact that the proposed alternative would require more cut, fill and remedial fill than two-thirds of the other alternative toll road routes analyzed by TCA it is clear that the proposed project was not selected because it was sited and designed to minimize the alteration of natural land forms.

Mitigation
As a result of the permanent adverse impacts to visual resources identified in the project EIS, TCA has proposed several strategies to minimize or avoid these impacts. TCA has determined that "No mitigation measures are necessary for short term visual impacts" and therefore has not proposed or committed to any mitigation strategies to minimize or offset the adverse visual impacts that may occur during the three year construction phase of the proposed project. The relevant proposed mitigation measures are presented and discussed individually below:

> *Measure AS-1. Adjacent landforms affected by the build Alternatives shall be re-contoured to a 2:1 slope or as determined appropriate through geotechnical investigation to provide a smooth and gradual transition between modified landforms and existing grade and to minimize the appearance of manufactured grading. Use of crib-type retaining walls in place of slopes shall be minimized, except where necessary to provide greater landform diversity, reduce fill slopes, minimize long, flat slope surfaces or potentially salvage rock outcroppings. In areas where sensitive habitat is not prevalent, the top and toe of the slope edges shall be rounded to reduce the angular effects of manufactured grading. The top of slopes where the surface breaks the horizon or ridgeline shall be undulated to avoid a straight edge along the skyline. For slopes greater than 20 m (65.6 feet), terrace drains shall be used to break up slope surfaces.*
>
> *The TCA or the implementing agency/agencies shall prepare Aesthetic Design Guidelines for the project, similar to the guidelines for the San Joaquin Hills Transportation Corridor and the Foothill/Eastern Transportation Corridor. It is not possible to provide these guidelines at this stage of the project. The guidelines will be developed during final design of a preferred alternative. The Design Guidelines shall specifically address grading, berm design, slopes, benches and the incorporation of sound and retaining walls. These Guidelines will be used in conjunction with the Landscape Design Guidelines described in measure AS-2 to minimize the visual impacts of the build Alternatives.*

Although this mitigation measure has the potential to reduce the massive amount of landform alteration required for TCA to implement the proposed project over the long-term, over the short-term (3-5 years) the visual resources of the project area would experience a substantially adverse impact due to the amount of vegetation clearance and grading implied in this measure. In addition, the proposed Aesthetic Design Guidelines

referenced above have yet to be developed by TCA or provided to Commission staff for review. The lack of these guidelines makes a thorough assessment of the reasonable potential for this measure to succeed in reducing the visual impacts of the proposed project very difficult. In addition, although this measure may succeed in masking the landform alteration required to install the toll road, because it is largely incompatible with the existing and surrounding setting the presence of the toll road itself would continue to adversely affect the visual quality of the area it occupies. This measure includes no provisions that would reduce the adverse impacts to the San Mateo Campground, Panhe Trail and Trestles Beach described above.

> *Measure AS-2. The TCA or the implementing agency/agencies shall prepare Landscape Design Guidelines that will specify plant species that will either be seeded or planted on all exposed areas such that these areas will blend with the surrounding vegetated areas. Native vegetation shall be placed in appropriate locations and densities to fit into the natural setting. Landscaping with varied height and species diversity shall be used and material selection, location of native plant materials and sculptured grading shall emulate the adjacent natural setting. Terrace drains shall be screened with periodic placement of native plant materials in a random manner to help blend these drainage facilities into the slope and not unintentionally emphasize these facilities. The Landscape Design Guidelines will include the locations of the shrubs and/or vining species, where appropriate, at the base of soundwalls to blend these structures as much as possible with the surrounding areas. All landscaping treatments and materials shall be consistent with the Landscape Design Guidelines.*

Similar to the above measure, this mitigation strategy has not been developed in sufficient detail to allow a thorough analysis. The palette of native vegetation to be used has not been provided to Commission staff for review and it is therefore not possible to determine how well these plants will integrate with the existing vegetation community and the amount of cover they will provide for the extensive areas of cleared soil that will result from this project. In addition, much of the area that would be occupied by the proposed toll road currently supports native plant communities, such as coastal sage scrub, that are rare, sensitive and susceptible to disturbance. It is uncertain whether or not these types of vegetation could be successfully propagated on the heavily disturbed soils that would result from the construction of the proposed project. Furthermore, as with mitigation measure AS-1 above, even if this measure were successfully implemented, the presence of the toll road would continue to adversely affect the visual and aesthetic resources of the project area.

> *Measure AS-4. In conjunction with operation of the corridor Alternatives, light shall be applied as effectively as possible by the TCA, minimizing both the glare of any light source and the spillover of light onto areas outside of the corridor right-of-way. The vertical or horizontal illuminance from roadway lighting sources shall not illuminate any surface outside of the right-of-way greater than*

> *1/10 of the road's average horizontal illuminance. On the segment of a build Alternative through the Conservancy, there shall be no illumination of any surface in the Conservancy outside the right-of-way of the SOCTIIP Alternative.*

Mitigation measure AS-3 was developed for several of the project alternatives that were not proposed as part of the current project and will therefore not be discussed. The above measure, AS-4 provides strategies to minimize the amount and extent of spillover lighting resulting from the proposed toll road. As discussed in the above section dedicated to night lighting, this measure would also not be directly applicable to the proposed project due to the fact that there is no lighting proposed for the portion of the toll road within the coastal zone.

Conclusion

For the reasons described above, the Commission finds that the proposed siting of the proposed toll road would add to the coastal public view shed a permanent feature that is not visually compatible with the surrounding area, that less damaging alternatives are available that would significantly reduce scenic view impacts, that the project does not minimize alteration of natural landforms, that the project has not been sited and designed to protect views to and along the ocean and scenic coastal areas, and that the project is inconsistent with the Coastal Act's scenic public view protection policy (Section 30251). Moreover, due to the close link between the visual and recreational policies at SOSB and Trestles, these inconsistencies exacerbate the additional inconsistencies with the public access and recreation policies of the Coastal Act discussed above.

D. Recreation- Surfing.

Section 30220 of the Coastal Act provides:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

Section 30213 provides:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.*

Surfing is the primary water oriented recreational activity in the vicinity of the proposed toll road. The Commission notes that surfing at Trestles is a low cost recreational activity. Compared to other recreational activities such as fishing, boating, or scuba diving, surfing is a much more economically feasible option for both visitors and residents. Most other recreational activities require the purchase or renting of expensive equipment and a specific time frame in which the recreation can take place. Surfing is free, requires minimal equipment, and its time frame is dependent only on the presence of waves suited for an individual's skill level. Many people surf multiple times a day or spend the whole day at the beach and surf. Surfing at Trestles is the epitome of a low-cost coastal recreational resource which is accorded high protection under Sections 30220 and 30213 the Coastal Act.

Description of the Resource

Setting

Trestles Beach, located at the mouth of the San Mateo Creek in San Onofre State Beach (SOSB) is world renowned for its consistent, near perfect waves. It is one of the best locations for year-round surfing in Southern California, an area that supports one of the greatest concentrations of surfers in the world. Lower Trestles is one of ten surf breaks worldwide chosen for the Association of Surfing Professionals Men's World Tour, and is the only one from the continental United States.[46]

Trestles is also considered exceptional due to the relatively natural state of its surrounding environment. There is a relatively low amount of urban and agricultural development and associated hydromodification upstream of the estuaries as compared to the surrounding region. Although there is little available data regarding water quality at the lower San Onofre and San Mateo Creek and lagoon areas, the small amount of known data for this area indicates water quality is good.[47]

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[46] *See* Association of Surfing Professionals, *Foster's ASP World Tour Schedule*, http://www.aspworldtour.com/2007/schedule.asp?rView=w&rRat=mwct&rNav=Men&rYear=2007&rTitulo=WCT (last visited on September 18, 2007).

[47] John Robertus, Executive Officer, California Regional Water Quality Control Board, San Diego Region, *Foothill Transportation Corridor- South (State Route 241)*, Letter to California Coastal Commission, June 27, 2007.

Trestles' coastal setting is virtually unparalleled in Southern California because all of the other major surf breaks in the region are in urban settings and cities. San Onofre State Beach is located on one of the last remaining undeveloped stretches of coastline south of Point Conception accessible to the public. To reach Trestles, surfers typically park at a public lot inland of Interstate 5 and hike, skate, or bike about 0.5 miles to the main trail that traverses an additional 0.5 miles through SOSB. This long approach walk from a highly urbanized area to the beach through the relatively unspoiled San Mateo Creek Wetlands Natural Preserve provides a transition not experienced at other surfing beaches. It affords opportunities for wildlife viewing, exposure to native vegetation and open space, and quiet self-reflection.[48] These opportunities are a rare experience for any surfer or beachgoer in Southern California, and therefore are highly valued. Surfline, a popular website for surfers, offers this description of Trestles:[49]

> *At the edge of Orange County's suburbia nightmare lies the Trestles experience -- one-and-a-half miles of God's country. No metered parking. No Ruby's Diner at the end of the pier. No blackballs, closeouts, volleyball nets or "Baywatch" sets -- simply put, Trestles is one of those destinations that just about any devoted surfer finds hard to resist.*
>
> *What makes it so irresistible? Obviously, the 100-yard lefts and rights -- which make even the most mundane surfer feel like Kelly Slater -- has something to do with it. But the complete Trestles experience offers so much more than a few tail-drifting off-the-lips. If you time it right, you can catch a bobcat or deer darting through the spindly brush and oak trees, looking for dinner or a drink in the nearby San Mateo Creek….*
>
> *Trestles is a fresh breath of air within the folds of the suffocating Orange Curtain.*

Recent poll results of the American surfing community also reflect that Trestles is a favorite surf break. More than 25% of respondents, when asked which surf break they would like to have in their own backyard, placed Trestles ahead of well known legendary breaks in Hawai'i and Indonesia.[50] Trestles is such a vital surfing experience that for many, it is the paragon of surfing destinations and each visit is a pilgrimage.[51]

Trestles stretches about 1.5 miles and consists of four primary and several secondary surf breaks. The primary breaks are known locally as Cottons, Uppers, Lowers, and Church, from

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[48] *See* California State Parks, *San Onofre State Beach*, http://www.parks.ca.gov/?page_id=647 (last visited on September 18, 2007).
[49] *See* Surfline, *Lower Trestles*, http://www.surfline.com/reports/report_travel.cfm?id=4740, (last visited on September 18, 2007).
[50] *See* Surfrider Foundation, *Trestles Surf*, http://www.surfrider.org/savetrestles/surf.asp, (last visited on September 18, 2007).
[51] California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, August 1997 at 2.

north to south respectively (Exhibit 29). The coastline near Trestles bends sharply to the east, therefore the beach faces south-southwest. Wave form and structure are not well understood, but a consensus exists that swell direction, bathymetric structure, and sediment transport play the key roles.

Wave Formation
As mentioned above, swell direction, bathymetric structure, and sediment transport play the key roles in wave formation. The proposed toll road is not expected to influence the incoming swell at Trestles. This may not be true for the bathymetric structure and sediment transport, however.

At the mouth of San Mateo Creek, large cobbles form a fan-shaped delta on the seafloor that extends from just north of Cottons to south of Uppers. A second fan-shaped cobble delta is found off of Lowers. The composite delta structure likely assumed its overall shape at the last glacial maximum, some 18,000 years ago, when sea level was approximately some 300 feet lower than it is today. The inland extent of the cobble delta is generally at the location of the modern day Mean Low Water, suggesting continued additions of cobble to the delta since its initial development. Oral accounts from surfers dating back to the 1950s indicate that the continuous presence of these cobbles is an important component of the high quality wave formation.[52] The exact role that these cobble deltas play in creating Trestles' surf conditions is not known, although the Commission, TCA's technical experts, and the opponents of the proposed toll road (opponents) all concur that the cobble substrate is an important component of the wave formation at Trestles. A general consensus exists that disturbance of the cobble deltas can be expected to change the wave formation. Where disagreement occurs between TCA and opponents is over the potential of the proposed toll road to disturb the cobbles and/or cobble delivery, and therefore potentially alter the high quality wave formation. This disagreement is discussed below in the section devoted to 'Impacts.'

The other component that can influence wave formation is sediment transport. Geologists study littoral cells, or portions of the coast within which sediment is circulated, to understand how sediment moves in and out of an area of the beach. Each cell contains a complete cycle of sedimentation including sources, transport paths, and sinks, and the circulation of sediment can be tracked by a careful inventory of the sediment budget involved in these processes. Trestles is part of the Oceanside littoral cell, which extends from Dana Point to La Jolla Point. Specifically, Trestles is in the northernmost sub-cell of the Oceanside littoral cell, defined as from Dana Point to San Mateo Point. Sediment is added to the cell via San Juan Creek, San Mateo Creek, and bluff erosion. Sediment is moved through the cell via longshore transport, which is the movement of sediment parallel to the shore rise, in this case primarily to the south.[53] Over time, the beach at Trestles has both widened and narrowed depending on the sediment budget.[54]

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[52] Philip Williams & Associates, Ltd. *Final Report: Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area*, Prepared for the Surfrider Foundation, January 2006.
[53] Id.

The volume and characteristics of sediment delivered and removed from a surf break influences the type of wave that forms. During large storm events, the volume of water discharged from San Mateo Creek is large enough to breach the sand spit that normally exists between the creek and the ocean. When this happens, sediment from the sand spit and from the creek is carried into the ocean. According to personal accounts by surfers, the surplus sediment never covers the cobbles because the wave energy in the surf zone prevents it from remaining there. Rather, the sediment forms temporary sandbars that extend southward from the mouth of the creek. The sandbars enhance certain types of waves that are favored by some surfers. The sandbars eventually wash away and normally do not reform until the next large storm event provides a new supply of sand.[55] The sandbar dynamic is an example of how a change in the amount or type of sediment can influence the wave formation. There is disagreement between TCA and opponents over the potential of the proposed toll road to alter the sediment coming into the northernmost sub-cell, and therefore potentially alter the high quality wave formation. This issue is also discussed below in the section entitled "Impacts."

History of Surfing

Surfing came to San Onofre in 1934 when surfers from Corona Del Mar, displaced by the Newport Harbor jetty expansion, sought a new home. On surfboards made of heavy planks, they rode the multiple breaks along a several hundred yard stretch at San Onofre to the south of Trestles, occasionally ranging north as far as Church. The gently rolling waves, ability to camp close by, and the beauty of the cliffs, together provided an aesthetic previously unknown. San Onofre quickly became an epicenter of surfing due to this aesthetic and the consistency of the surf.[56]

By the late 1940s, overnight camping was no longer possible due to the restrictions imposed by the area's new owners, the Camp Pendleton Marine Corps. Surfers began to spend more downtime in San Clemente and camped at Calafia Beach (called "the hole"), which is the current location of San Clemente State Park. Innovations in the design of surfboards in the early 1950s allowed surfing to spread to the more critical breaks at Uppers and Lowers, where waves are faster and require more maneuverable surfboards. Trestles became a surf mecca, drawing surfers from all over the state to its shores. The creation of SOSB in the early 1970s brought highly publicized surf contests to Trestles, which served to raise its profile even further, and Trestles began to be known around the world as one of California's best waves. Surfing is now a multi-billion dollar industry and California is one the most important centers of that industry. Trestles serves as one of the image engines for that industry.[57]

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[54] Transportation Corridor Agencies, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP): *Final Subsequent Environmental Impact Report (December 2005) (hereafter "FSEIR"), Skelly Engineering Review of Sediment Transport Study*, Vol. VI, Attachment 11.
[55] *See* Footnote 53.
[56] Personal communication between Commission staff and Steve Pezman, publisher of the *Surfer's Journal*, on August 24, 2007.
[57] Id.

Recreational Use of the Resource

Number of Users

Over one million surfers are estimated to surf once a week or more throughout the year in California, with occasional or seasonal surfers perhaps tripling that total. The number of surfers that travel to Trestles each year has steadily increased since record keeping began in the early 1990s. Over 367,000 visitors came to Trestles in 2006, the vast majority of which came to surf. Trestles is projected to host 400,000 visitors/surfers in 2007.[58]

Hundreds of surfers flock to Trestles daily. There are typically between four and five turn-overs (from pre-dawn to dark) in the population at each break during the day, with surfers arriving and leaving so that at any given time there are about 150 surfers in the water at Trestles during the summer. On winter swell angles there are more surf breaks at peak quality from which to choose and Trestles hosts about two-thirds of the normal summer crowd.[59]

Trestles is distinctive because it has a variety of breaks and different types of waves that are consistently available to surfers of all ages and abilities year round. Trestles is one of only a handful of surf breaks in southern California that provide top quality summer waves. These attributes of Trestles helped establish surfing as a recreation, a lifestyle, a culture, and a part of Southern California's identity.[60]

Economic Value

Trestles is a source of local pride, as well as income, for the residents of San Clemente. The city's identity is inextricably linked to the development and culture of surfing. On its website, the San Clemente Chamber of Commerce lists "Surfing Legacy" as one of five defining features that describe the city. This Surfing Legacy lists local surf breaks, including Trestles, and makes the following statements about San Clemente: (1) it is a premiere surfing destination, (2) it is the surfing media capitol of the entire world because it houses all of the leading industry publications, (3) it has a large concentration of surfboard shapers, manufacturers, and famous surfers, and (4) its only high school has won six of the last seven National Scholastic Surfing Association (NSSA) Championships.[61]

Recent research indicates the annual economic impact to the City of San Clemente from surfers visiting Trestles is in the range of $8 million per year to $13 million per year. This range does not include the secondary impacts, including multiplier impacts, on sales, income, and employment. This research, a web-based survey instrument that analyzed 973 surveys

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[58] Personal communication between Commission staff and Steve Long, South Sector Superintendent Orange Coast District, California Department of Parks and Recreation, on September 5, 2007.
[59] Id.
[60] *See* Footnote 57.
[61] *See* San Clemente Chamber of Commerce, *San Clemente, Surfing Legacy*, http://www.scchamber.com/HTML/city/sanclemente.htm (last visited on September 18, 2007).

collected in 2006, characterized the demographics, visitation patterns and expenditures of surfers who visit Trestles. Some other important findings include:[62]

- Over 83% of the surfers surveyed came from cities outside of San Clemente.
- Trestles Beach attracts surfers from all counties in Southern California.
- Surfers who visit Trestles most frequently come from other "surf towns" including cities in north San Diego County, South Bay Los Angeles, Huntington Beach, and San Diego.
- The data collected reveals that Trestles surfers exhibit demographic characteristics that are comparable to San Clemente and California beach goers. Surfers visiting Trestles average 35.6 years of age, are well educated (42% of respondents have a minimum of a college degree), work full time (76% of respondents work full time), and earn a high wage (41% earn $80,000 or more in individual income).

Trestles hosts both professional and amateur surf contests every year. The largest and most well known contest held is the Association of Surfing Professionals' (ASP) World Tour, which occurs every September. In 2007, from September 9-15, Trestles was stop number six on the ten stop Men's Division World Tour for the top 45 competitive surfers in the world. This $3.6 million production lasts for five days and spawns 15,000 spectators that gather at Trestles, and an additional 1 million viewers that watch the live camera feed online. SOSB charges the ASP a permit fee that constitutes a significant portion of its annual operating budget. Spillover effects benefit local businesses of San Clemente as well. All of the hotels sell out and the other commercial establishments do a brisk business.[63]

Other major surf contests held at Trestles include: an ASP World Qualifying Event, the Body Glove Surfbout, held every April; and the NSSA National Championship, the championship of the highest profile amateur competitive surfing association in the United States, held every June. Six other minor surf contests also occur during the remainder of the year. All of these contests also generate much needed revenue for the SOSB through permit and parking fees. Without this additional income, the SOSB would not be able to operate as it currently does.[64]

Impacts

As indicated above, two things qualify Trestles as a world-class surf break: its consistent high quality waves and its aesthetic. The high quality waves are derived from the incoming swell, the cobbles, and sediment—of which only the cobbles and sediment may be impacted by the proposed toll road. The aesthetic, as it applies to Trestles, is its clean water and natural setting. Expert opinions that examine these attributes in further detail are reviewed below.

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[62] Chad Nelsen, Doctoral Candidate, UCLA Environmental Science and Engineering Program, *The Economic Impact of Surfers Visiting Trestles to the City of San Clemente*, Memo to the California Coastal Commission, September 12, 2007.
[63] *See* Footnote 59.
[64] Id.

This section contains two parts: TCA's assessment of the cobbles, sediment transport, and the aesthetic; and a study commissioned by the Surfrider Foundation (Surfrider) that assesses impacts to the San Mateo watershed and reviews TCA's studies.

TCA

The Cobbles

Very few studies are available that examine the link between the cobbles and wave formation. However, documents submitted by both TCA and Surfrider indicate a very strong causal link between the cobbles and the waves. TCA acknowledges that impacts to the cobbles would result in impacts to the surfing resources, "It is recognized that the cobbles on the shoreline at Trestles are the foundation of the surf break."[65]

TCA commissioned a basic study to determine the source of the cobbles.[66] Based on field observations, the cobbles were determined to be comprised of metavolcanic and metasedimentary rock, with lesser amounts of granitic rock. Although cobbles are found throughout the watershed, the primary source is considered to be the metavolcanic, metasedimenary, and granitic bedrock underlying the eastern portions of the San Mateo Creek watershed. Over time, this bedrock weathers mechanically and fragments are carried downstream through various tributaries, into the San Mateo Creek, and out into the Pacific Ocean. The cobbles move downstream during high flow events and TCA estimates it takes a 50-year storm event to move the cobbles from the lower part of the San Mateo Creek towards the delta in the ocean. Experts believe that this is both an historic and active process.

TCA contends that because the alignment of the proposed toll road is in the far western portion of the San Mateo Creek watershed, cobbles from the eastern portion of the watershed will continue to be able to flow down their tributaries and into San Mateo Creek. TCA believes that the delivery of the cobbles to the shoreline will not be affected, and therefore the proposed toll road will have no long term impacts or cumulative impacts on the surfing resources.[67]

Sediment Transport

As reviewed above, the amount of sediment in a given littoral cell influences wave formation. At Trestles, this is seen regularly when San Mateo Creek breaches the sand barrier during large storm events, resulting in sandbar formation and discernible changes to the waves by surfers. Again, a paucity of data exist regarding how sediment is transported specifically in San Mateo Creek.

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[65] Robert Crisman, Engineering Geologist and David Skelly, Civil Engineer, GeoSoils, Inc., *Preliminary Clast (Cobble Fraction) Provenance Study, Lower San Mateo Creek, in Conjunction with the South Orange County Transportation Project, Orange County, California.* Letter Report to TCA, May 30, 2007.
[66] Id.
[67] David Skelly, Civil Engineer, GeoSoils, Inc., *Additional Discussion of Surfing Resources in the Vicinity of San Mateo Creek and Potential Impacts of the Proposed Toll Road, Orange County, California.* Letter Report to TCA, May 30, 2007.

TCA commissioned a study to estimate the impacts from the toll road to the current sediment transport rate. This study cited previous research that determined San Mateo Creek to be a transport capacity-controlled creek. A creek is "transport capacity-controlled" when there is more sediment delivered to the stream than can be moved by it under current conditions. Such a stream will be accumulating sediment in its channel, bars, and floodplain. A hydraulic study was performed to assess changes that would result from placing bridge supports in the main channel of San Mateo Creek. This study allowed for small increases in runoff based on the anticipation that increases in impermeable surfaces will be mostly balanced by Best Management Practices (BMPs), resulting in hydraulic conditions very similar to the existing conditions. The hydraulic model indicates that the proposed toll road and associated BMPs will cause only very slight changes to the average peak discharges for the 2-year, the 10-year and the 100-year storm events throughout the lower portion of San Mateo Creek. The creek was subdivided into 12 separate reaches and the changes in peak discharge vary from reach to reach. *Table 2.1* from this study shows the changes to peak discharge for the 2-year, 10-year and 100-year storm events, averaged over the 12 reaches. [68]

Table 2.1: San Mateo Creek Summary of Peak Discharges (from *Sediment Continuity Analysis*)

Return Period Stor	Existing Peak Discha (cfs)	With Project Peak Discharge (cfs)	Difference (%)
2-year	406	411	1
10-year	6,999	7025	0
100-year	47,312	47,356	0

The reach-by-reach results from the hydraulic model were used to estimate changes to sediment transport. The sediment transport analysis examined the creek channel sediments with diameters less than 1.5 mm. The analysis did not examine cobble transport and did not address existing or "with project" cobble transport rates. Cobble movement is not normally addressed by the standard sediment transport models and this study correctly notes that a multiple grain-size sediment transport function should be used. Despite this recommendation, only one sediment gradation curve was used to model sediment transport.[69]

The results of the sediment transport analysis indicated that on average, there are only slight changes between the existing conditions and the conditions with the proposed toll road. The changes for the 2-year, 10-year and 100-year storm events, averaged over the 12 reaches, were 1.6%, 0.25%, and -0.75% respectively. Some reaches might have significant differences; for example, during the 100-year flood event, there could be as much as a 9% decrease in the volume of sediment transport through Reach 3 (upstream of the San Mateo Creek crossing). But, overall, the change in sediment transport is expected to be very slight.[70]

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[68] Paul Bopp, P.E., *Sediment Continuity Analysis Lower San Mateo Creek, South Orange County Transportation Infrastructure Improvement Project*, Prepared for TCA, September 2004.
[69] Id.
[70] Id.

The model results show only very slight changes to sediment transport for San Mateo Creek, in part, because only 0.3% of the San Mateo watershed is estimated to be altered. This very small alteration creates insignificant changes to the hydrology and hydraulics of the channel, which translates into an insignificant change to the sediment transport. The study also determines the cumulative impacts to be insignificant, again because changes to the hydraulics were insignificant. As the creek is transport capacity- controlled, insignificant changes in sediment transport mean that there will be insignificant changes in the amount of sediment delivered to Trestles beach. TCA therefore contends there will be insignificant impacts to sediment transport and delivery to Trestles.[71]

TCA also commissioned a review of the sediment transport study. This review concluded that wave formation is not sensitive to very small changes in sediments delivered either alongshore or from the San Mateo Creek, and that the proposed toll road will have an insignificant impact on the transport of sediment to the shoreline and thus no effect on the quality of the surf at Trestles Beach.[72]

<u>The Aesthetic</u>
TCA acknowledges that at Trestles, clean water and a natural setting make the surf break world-class.[73] TCA did not provide baseline information regarding the current water quality at Trestles. However, TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices (BMPs) and treat additional runoff from I-5.[74] On September 17, 2007, TCA submitted its most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff. As will be discussed in the Water Quality section of this report, the Commission has questioned the benefits and adequacy of this plan.

TCA also contends that the natural setting is an important component of Trestles. As described above, Trestles, and the trails leading to it, exists in a relatively natural setting. The previous section of this report, entitled Public Access and Recreation, discusses the proposed toll road's adverse impacts to the trail connecting San Mateo Campground (part of SOSB) with the beach and to the viewshed of surfers looking back at the landscape. TCA did not assess impacts to these resources within the context of the natural setting of Trestles.

Surfers use two primary trails to get to Trestles, the Panhe Trail and the Upper Trestles Trail. A portion of the Panhe Trail, which provides access from the San Mateo Campground, is proposed to be removed and re-located. This is a dirt trail that passes adjacent to the existing Cristianitos Road for a brief stretch but is otherwise surrounded by open space. It will no longer be possible to walk from the campgrounds to the beach along a relatively undeveloped

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[71] Id.
[72] *See* Footnote 55.
[73] *See* Footnote 68.
[74] Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 (hereafter "*Consistency Application*") at 33.

stretch of land. A new trail will be built to mitigate this loss, but it will be a paved sidewalk trail adjacent to the re-aligned Cristianitos Road and the proposed toll road. It will rise approximately 30 feet in the air to cross over the proposed toll road. During the three years of construction projected to take place, a temporary trail will run parallel to the temporarily aligned Cristianitos Road. Use of this temporary trail would be periodically interrupted for a few minutes at a time as temporary or new paths are tied in. The Upper Trestles Trail, which provides access from a public parking lot, will not be affected and will continue to be accessible.[75] TCA's impact analysis was limited to ensuring that coastal access will be provided throughout the construction and operation of the proposed toll road. As discussed in the Public Access and Recreation section, TCA significantly downplayed the adverse effects to recreational quality from the lengthy and highly intrusive construction impacts, as well as the permanent degradation of the aesthetics from the changes to the trail alignment, and TCA ignored the value of the natural setting as an integral part of surfers' recreational experience.

TCA assessed impacts to the viewshed experienced by surfers in the water as they view the landscape, and determined these effects adverse but less than substantial. TCA maintains that the changes in views from the surfing resource will not be substantially changed or that these resources are not considered to be sensitive to changes in the viewshed.[76] This issue is also addressed in the Public Access and Recreation Section of this report, where it discusses changes to visual and other qualities of the recreational experience at SOSB.

Surfrider Foundation Study

TCA's cobble and sediment transport studies chose to compare potential impacts of a 2 mile study area in the lower San Mateo Creek within the context of the entire San Mateo Creek watershed of 139 square miles. By contrast, the Surfrider study defined 20 sub-watersheds within the San Mateo Creek watershed that the proposed toll road will pass through. The percentage of each sub-watershed occupied by the proposed toll road and the percentage that would become impermeable was calculated. These percentages, they argue, are a far more accurate depiction of potential impacts to the watershed downstream of the crossing of San Mateo Creek (the 2 mile study area) than that submitted by TCA. Of the 20 sub-watersheds, one-quarter will have 50% or more of their watershed occupied by the proposed toll road with a corresponding increase in impermeability. Some of the 20 sub-watersheds will receive little impact, while two will be 100% occupied. Studies have shown that an increase of 10% in the impermeability of a sub-watershed will cause severe degradation to aquatic resources from erosion.[77] The eight sub-watersheds closest to the mouth of San Mateo Creek will, on average, have 40% of their watersheds impacted.[78]

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[75] TCA response to Commission staff questions via email on September 7, 2007.
[76] LSA, Foothill Transportation Corridor South, *Focused Summary of Environmental Impacts in the Coastal Zone*, March 2007 at 2.13-23.
[77] Bob Battalio, P.E., Philip Williams & Associates, Ltd., *Final Report: Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area (Hereafter "Potential Toll Road Impacts"*, Prepared for the Surfrider Foundation, January 11, 2006.
[78] Bob Battalio, Professional Engineer, Philip Williams & Associates, Ltd., *Orange County Toll Road-Comments on Skelly Reports*, Letter to Mark Rouscher, Surfrider Foundation, August 31, 2007.

The Surfrider study also discusses how increases in disturbance to and impermeability of sub-watersheds upstream creates channel erosion and degradation downstream. Although TCA has proposed traditional erosion control measures, this study points out that these measures have not worked well historically in this area. The ensuing erosion will increase the amount of sediment in San Mateo Creek. The result, the study predicts, will not be an alteration of the *amount* of sediment transported (because the San Mateo Creek is transport capacity-controlled), but rather an alteration of the *grain size* of sediment transported. Based on the geologic characteristics of the lower watershed and the areas where erosion will be concentrated, project-related erosion will increase the amount of medium- and fine-sized grain sediment from the watershed and deposit more than currently exists into the stream channel. When there is more medium- and fine-sized grain sediment in the creek, the transport of larger-sized sediment (such as gravel and cobbles) tends to decrease, and a greater proportion of medium and fine-sized grain sediment is transported down the creek. This change to a smaller grain size of sediment, while not affecting the overall amount of sediment delivered, has the potential to reduce the delivery of cobbles to Trestles.[79]

Lastly, the Surfrider study disputes the notion that the proposed toll road will have less of an impact because the mouth of San Mateo Creek is not open to the ocean year round. The study points out that San Mateo Creek would not be expected to be open to the ocean more than occasionally anyway. It connects with the ocean episodically, as do many of California's creeks and streams. Since this is its normal status, that doesn't reduce impacts in any appreciable way. Also, if more medium- and fine-sized grain sediment is delivered to the ocean as a result of the proposed toll road, it will have impacts for a longer period than just the few days the creek is open to the ocean as it is re-worked by waves and changes the shoreline and/or mouth morphology.[80]

In summary, the Surfrider study agrees with TCA that the cobbles are the foundation of the surf break, and that impacts to the cobbles will impact the waves. But it does assert the impacts to the surfing resources may be far greater than TCA's studies convey. By examining impacts to the lower portions of the San Mateo Creek watershed, rather than the entire watershed (as TCA did), the impacts are seen as much more severe and significant. By examining impacts from a change in grain size characteristics of sediment being transported, rather than just the total amount of sediment (as TCA did), a potential for cobble delivery to be impeded is made apparent. Given the unique and highly valued resource that is Trestles, this study recommends careful and more complete study prior to moving forward with the proposed toll road.[81]

Mitigation

While TCA maintains that changes in hydrology will result in negligible changes in sediment transport and no impact on cobble transport, TCA proposes mitigation measures as an

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[79] *See Potential Toll Road Impacts.*
[80] Id.
[81] Id.

additional assurance that surfing resources will not be adversely affected.[82] Mitigation measures proposed for recreational impacts include measures related to noise, air quality, visual quality, and transportation.[83] The adequacy of these measures is also discussed in the Public Access and Recreation Section of this report.

Opponents' Contentions

TCA received comments from the following four groups on its *Draft Environmental Impact Statement/Supplemental Environmental Impact Report* ("DEIS/SEIR") and *Final Supplemental Environmental Impact Report* ("FSIR") pertaining to impacts to surfing resources. In general, these commenters believe that TCA's assessment of the surfing resources and potential impacts is inadequate.

<u>California Department of Parks and Recreation:</u>
Comments to TCA regarding the Final SEIR dated January 10, 2006: [84]

> *The analysis of the variation in shoreline changes (from TCA's studies) is not tied to surf or bottom conditions. The sediment production of the San Mateo Creek watershed can be predicted to greatly increase following construction of the proposed project. The substrate is very subject to erosion, since it is made up entirely of sediments and the FSEIR's assurances that application of BMPs to limit erosion will be effective simply cannot be justified. Cuts and fills required for a 126 foot wide roadway, plus interchanges, culverts, sediment detention basins, intermittent and perennial stream crossings will have real and persistent impacts on the largely intact San Mateo Creek watershed. California State Parks has received similar assurances that new highway construction will be able to control erosion in the past. At a Northern California State Park, and despite current Regional Water Quality Control Board requirements, tons of sediment from a newly constructed Caltrans multi-lane roadway swamped the park's drainages, requiring the construction of 27 emergency sediment control basins within the park to contain a portion of the eroding materials. Similarly, a fill constructed by TCA (to the same standards as proposed for the toll road) in upper Deer Canyon failed, depositing hundreds of cubic yards into watersheds of Crystal Cove State Park.*
>
> *When watersheds are impacted by anthropogenic factors, even small quantitative changes can have dramatic qualitative effects on the runoff, style of mass wasting, and consequent modification of flow regimes.*
>
> *Contrary to TCA's report by Skelly that contends most of the sediments that feed the delta are delivered under conditions that have recurrence intervals greater than 10*

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[82] *See Consistency Application* at 26.
[83] *See FSEIR* at Vol. II, 4.25-147.
[84] Ruth Coleman, Director, California Department of Parks and Recreation, *Subject: South Orange County Transportation Infrastructure Improvement Project Draft Final Subsequent Environmental Impact Report,* Letter to TCA, January 10, 2006.

years, most sediments are transported at bankfull stage- the one to two year maximum event.

Not addressed in TCA's reports is the potential reason for the relatively persistent delta deposits associated with the Trestles surf spots. One reason for the persistence might be the relatively pristine, undeveloped nature of San Mateo and San Onofre watersheds, compared to the intensely developed watershed to the north. With development of the watershed, the sediment delivery may reduce (from paving), increase (from disruption of the landscape and surface erosion), or change in character.

The concluding sentences (of TCA's report by Skelly) are unsubstantiated: 'The SOCTIIP will have an insignificant impact on the transport of sediment to the shoreline. The SOCTIIP will have no measurable impact on surfing resources.' The argument is based exclusively on the purported limited change in sediment transport from the hydraulic models, and on the short documented history of surfing popularity at Trestles. The FSEIR fails to assure the public and California State Parks that the world-class surf break at Trestles will not be adversely impacted.

<u>Shute, Mihaly, and Weinberger:</u>
Comments to TCA regarding the Final SEIR dated January 12, 2006:[85]

The FEIR erroneously concludes that the toll road will have less than significant effects on wave formation at Trestles Beach. The Skelly Reports make unsupported assumptions, fail to account for potential impacts to the surf, and use incomplete data.

In particular, the Skelly Reports inappropriately focus solely on the volume of the sediment that results from the toll road without accounting for the composition of the sediment which has crucial impacts to the resulting surf formation. The reports assume that because the creek is transport limited, that introduction of additional sediment will not increase sediment delivery. However, increasing sediment to transport-limited streams alters the composition of the sediments transported, increasing fine sediment delivery and causing increased deposition of coarser sediment. Thus, construction of the toll road may reduce the coarse sediment delivery (and potentially cobbles) to Trestles Beach, even in transport-limited conditions, and thereby impact wave and surfing conditions.

<u>SWAPE:</u>
Comments to TCA regarding the Draft EIS/SEIR dated July 28, 2004:[86]

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[85] William White and Kevin Bundy, Shute, Mihaly & Weinberger LLP, *Comments on Final SEIR and Related Findings for the SOCTIIP Project*, Letter to TCA, January 12, 2006.
[86] Matt Hagemann, Soil Water Air Protection Enterprise, *Comments on the Environmental Impact Statement/Subsequent Environmental Impact Report for the South Orange County Transportation Infrastructure Improvement Project*, Letter to TCA from SWAPE, July 28, 2004.

Because the watershed is currently undeveloped, the supply of sediment in San Mateo Creek is in a fragile, natural equilibrium, one that is subject to potential disturbance from the construction of extended sediment basins (EDBs) proposed for this project. The EDBs are specifically designed to allow sediment and particulates to settle out of suspension and to be removed from the supply that nourishes the coast. Removal of sediment for the hydrologic system will also increase the capacity of the streams to locally scour and incise their channels, resulting in disequilibrium conditions. Aliso Creek is an Orange County example of disequilibrium conditions where streams have incised and scoured their channels to depths in excess of twenty feet. To mitigate these conditions in Aliso Creek, streambeds and stream banks have to be armored and drops in streambed elevation are engineered structures.

The Runoff Management Plan states: "Periodic sediment removal to ensure 0.5 meter depth threshold" is necessary for maintenance. This will remove sediment from the stream systems. The Runoff Management Plan therefore acknowledges that the EDBs will act as a sink, removing sediment from the supply needed to sustain coastal beaches and surfing resources.

Surfrider Foundation:
Comments to TCA regarding the Draft EIS/SEIR dated 2004:[87]

Created as part of the mitigation efforts for the San Onofre Nuclear Power Plant, the SOSB campground is one of the few campgrounds on the California coast within walking distance of the ocean.

The DEIR includes NO mention of the many walking and biking rails that traverse the SOSB and San Mateo campground, despite alignments that would run directly over existing beach access paths. Specific temporary and permanent impacts to access to the Trestles beach and SOSB must be described.

Commission Analysis
The Commission notes that the San Mateo Creek watershed is one of the last undeveloped watersheds in Southern California. The upper reaches of the watershed, comprised of steep terrain and slopes of primarily sandy and silty soils, deliver a specific mix of both fine gradient sediments and coarse grain sands and cobbles to the lower watershed where it is ultimately discharged into the Pacific Ocean. It is this specific mix of sediments, sands, and cobbles that is responsible for the high quality waves at Trestles. Due to the relatively pristine nature of the watershed and the types of soils and terrain present, even small changes in its hydrology can alter this specific mix of sediment and potentially alter the waves at Trestles.

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[87] Christopher Evans, Executive Director, and Mark Cousineau, Chair, Orange County Chapter, Surfrider Foundation, *Comments on DEIR/EIS for the South Orange County Transportation Infrastructure Improvement Project*, Letter to TCA, 2004.

Section 30220 requires that surfing at Trestles be protected because it cannot be provided at inland water areas. The question before the Commission is: Can TCA guarantee that surfing at Trestles will be protected if the toll road is built? This question is analyzed in the context of the two characteristics that qualify Trestles as a world-class surf break: (1) its consistent high quality waves, and (2) its aesthetic. This is followed by an analysis of indirect effects.

High Quality Wave Formation
As noted earlier, the general consensus is that the cobbles play a major role in the formation of surfing waves at Trestles. The cobbles form a fan-shaped delta offshore of the mouth of San Mateo Creek that is believed to sustain the waves.

Recent coastal sediment research indicates that in a nearshore cobble beach environment (like Trestles) the movement of cobble under wave action is greatly affected by the amounts of finer sediments that fill the voids between the cobble. Generally, when there is an increase in fine sediment the cobbles move offshore. A decrease in fine sediment causes cobbles to move onshore.[88]

In addition, surfing conditions are also influenced by the discharge of water and sand sized sediment from San Mateo Creek. Anecdotal reports from surfers who noticed changed surf conditions following a discharge event, the location of the break at the mouth of the Creek, and the fan shape of the cobbles support this.

Therefore, the waves at Trestles can be impacted in either of two ways: through the reduced delivery of cobbles to the ocean via San Mateo Creek; or through a change or increase in the ratio of fine sediment grains to cobbles that are delivered to the ocean via San Mateo Creek. Changes to either of these can impact the fan-shaped cobble delta and the formation of high quality waves. Due to the supply of cobbles currently in the channel, this is likely to be a delayed impact with long term effects seen after this existing supply is diminished.

The Commission's geologist concurs with TCA's hypothesis that the primary source of cobbles is the eastern San Mateo watershed and that cobbles will continue to be able to move down the watershed towards San Mateo Creek during large storm events. But detailed information on the cobble delivery system is critical to any determination relating to impacts on surfing. For example, the ability of the cobbles to successfully descend through the lower portions of San Mateo Creek (where the proposed toll road will have effects) and into the Pacific Ocean remains uncertain. The Commission notes that any increase in fine sediment or decrease in peak flow rate in the watershed is going to reduce cobble transport and therefore impact the high quality wave formation.

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[88] Philip Williams & Associates, *Foothill Transportation-South Runoff Management Plan Supplemental Documentation Review and Comment*, Letter to Patrick Kruer, Chairman of the California Coastal Commission, January 22, 2008.

TCA asserts cobble delivery will not be thwarted and an increase in fine sediments will not occur because its studies show the proposed toll road will bring about only small changes to the hydrology and sediment transport because: a) it will incorporate BMPs and b) it will disrupt only 0.3% of the San Mateo watershed. These assertions are made without providing information regarding distribution of sediment grain sizes or sediment composition.

Best Management Practices

The TCA study asserts that hydraulics and therefore hydrology and sediment transport will be maintained through the inclusion of Best Management Practices (BMPs). While they do acknowledge that small amounts of sand may increase, they otherwise claim the BMPs will prevent increases in flow rates and erosion. However, there is no supporting evidence such as sediment rating curves to support its argument.

TCA does not address the grain size characteristics of the sediment, and this is one of the main factors determining and influencing cobble transport. The Surfrider study contends the proposed toll road would increase the amount of impermeable area, resulting in more rapid runoff from the same amount of rainfall, creating more surface erosion. San Mateo Creek already has large variability in the volume and velocity of flows due to the great variability in rainfall that is characteristic of the southern California climate. The more rapid runoff into San Mateo Creek estimated under the Surfrider study would increase the magnitude of the peak events on the creek. The consequences of increased runoff can result in gullying, bank scour, head cutting, increased sedimentation, and changes to the creek bed; examples of these conditions can be seen in many of the developed watersheds of Orange and San Diego Counties (and is referred to in the Deer Canyon case below). The volume and velocity of the discharge from San Mateo Creek will greatly influence the sediment transport modeling. The Surfrider study questions whether the proposed BMPs will be able to prevent these conditions and whether BMPs will be able to prevent an influx of the medium- and fine-sized grain sediment especially during the 2-year flow events. The Commission's geologist concurs that an increase in the amount of medium- and fine-sized grain sediment may decrease the transport of gravel and cobbles. As stated earlier, an increase in fine sediment or a decrease in peak flow rate is going to reduce cobble transport and impact high quality wave formation.

Since the publication of the Staff Report, the Commission reviewed TCA's Runoff Management Plan (RMP) submitted late September, 2007 and its application for a 401 Permit to the California Regional Water Quality Control Board dated January 4, 2008. Overall, the Commission has reservations about the analyses performed and the conclusions drawn. Prior to Commission analysis of these documents, it is first necessary to explain some basic aspects of how water will descend through the various sub-watersheds when it rains.

In the absence of roadways, rainwater normally infiltrates into the ground and flows at some natural rate into various tributaries, creeks, and streams. These feed into larger creeks and streams, and eventually the water descends through its sub-watershed and into a primary creek channel (San Mateo Creek), which ultimately discharges into the Pacific Ocean. Along the way, this runoff also moves sediment. The amount and composition (grain size) of sediment

that it acquires is a function of how fast the runoff is flowing (flow rate) and the type of sediment it encounters. The higher the flow, the larger the grain it can transport. Generally cobble is transported only during large flow events.

Roadways influence hydrology because they reduce infiltration and increase runoff flowrates and volumes as compared to unpaved surfaces. To mitigate the impacts increased runoff flow rates and volumes can have downstream, runoff from roadways is often directed into detention basins or other treatment control BMPs that capture the water, allow pollutants to settle out, and then discharge runoff slowly back onto its natural path through creeks and streams. Roadways influence hydrology in another important by bisecting natural drainages. Culverts are often utilized to route runoff from the upper subwatershed (area above the roadway) underneath the roadway. However, culverts also limit infiltration along the flowpath, alter the timing of runoff delivery, often resulting in minor increases in runoff flow rates and volumes.

For the proposed toll road, TCA proposes to route runoff from large segments of the highway past several subwatershed drainages to treatment control BMPs. This will increase the runoff volume that is discharged from the treatment control BMPs into the downstream channel while decreasing the runoff volume discharged to the bypassed channels. The combined runoff acts to increase the runoff volume discharged to the channels downstream of the treatment control BMPs. TCA has proposed energy dissipators be installed to prevent erosion at the point of discharge as it goes back onto its natural path through creeks and streams. But energy dissipators will not account for the increased runoff volume discharged to channels downstream of the treatment control BMPs. Proper analysis and modeling can account for this increase in volume and flowrate from upper sub-watersheds.

Due to the undisturbed nature of the San Mateo Creek watershed and the surfing resources dependence upon the delivery of a specific mix of sediments, sands, and cobbles, typical BMPs will most likely not be adequate for the proposed toll road. A review of TCA's RMP and 401 Permit reveals that TCA has proposed only typical BMPs and has excluded large portions of runoff from receiving treatment BMPs at all.

For example, TCA uses the term "offsite" runoff for all of the runoff draining from above the proposed toll road and for all of the runoff draining along the cut and fill slopes that would be created to build the proposed toll road. All of the "offsite" runoff would be directed through longitudinal ditches and cross culverts to pass underneath the proposed toll road and would be discharged to existing drainage channels that currently route runoff. The runoff would not be routed through detention basins or other treatment control BMPs that allow sediment and pollutants to settle out. Therefore, all of this runoff would be discharged back into the sub-watershed untreated. TCA has proposed rip rap be installed at the discharge point to limit erosion, which may work at that point. However erosion can still occur downstream of the rip rap if there are even small increases in flow rate and/or volume discharged into the downstream channel.

Even more importantly, this "offsite" runoff will be draining from about 530 acres of cut and fill slopes (steep slopes) with cuts ranging as wide as 800 feet from the proposed toll road and up to 250 feet high. There is no detailed information regarding how these cut and fill slopes will be stabilized. TCA has suggested it will use source control BMPs such as hydroseeding (or revegetation), but given the steepness of the slopes and hydroseeding's generally limited success rate the Commission is not convinced this will be 100% effective at preventing development of new sources of fine sediment, as TCA claims. The Commission notes that these source control BMPs would have to be 100% effective to keep the cut and fill slopes from becoming a new source of fine sediment because there are no detention basins or any other type of treatment control BMP proposed as a backup to the source control BMPs for the "offsite" runoff. In other words, if the source control BMPs do not perform at 100%, sediment will erode from these steep slopes and be discharged into the downstream drainage channels, increasing the fine sediment contribution to San Mateo Creek. Without detailed plans showing how TCA will ensure its source control BMPs will be 100% effective, the Commission is not convinced this is possible.

The Commission investigated TCA's track record with source control BMPs. Through conversations with CDPR, the Commission staff obtained historical facts regarding a previous TCA project, the San Joaquin Hills Transportation Corridor (SJHTC), which the Commission also reviewed. Approximately 10 years ago TCA experienced failures of its BMPs on "the sliver," an area spanning 35 acres of ridge-top in what is today part of the Laguna Coast Wilderness. This land functioned at the time, and still does, as part of the conservation area for the Natural Communities Conservation Plan/Habitat Conservation Plan. Runoff normally flows down Deer Canyon and into the El Moro Creek sub-watershed within Crystal Cove State Park. TCA re-vegetated this area following construction of the SJHTC. CDPR expressed specific concerns to TCA about potential erosion issues. Following a heavy rain, water diversion caused severe erosion on the constructed slope into Deer Canyon. CDPR personnel measured 10 foot deep gashes in the land and estimated 2,000 cubic yards of sediment was dumped into Crystal Cove State Park. Based on this experience, and having witnessed the failure of BMPs on other projects as well, CDPR is very concerned about having more BMP failures with the proposed toll road. CDPR considers the movement of 41 million cubic yards of cut and fill in a traditional land slide area to be an epic undertaking, and has expressed significant doubt that it can be successfully accomplished.[89] TCA asserts the proposed toll road will use improved BMPs over those that failed at Deer Canyon and has submitted an analysis to the Commission staff of "lessons learned" from those failures. However, the Commission has not forgotten that TCA made the same optimistic claims during Commission review of the SJHTC (Consistency Certification CC-63-92/CDP 5-92-232) that its then "state-of-the-art BMPs" would avoid water quality problems.

Based on the SJHTC experience, the Commission has reason to doubt TCA's claim that it can prevent erosion with the proposed mitigation. In addition, the Commission is concerned that

[89] Personal communication between Commission staff and David Pryor, Environmental Scientist, California Department of Parks and Recreation, on September 17, 2007.

"offsite" runoff will go untreated unless the source BMPs are 100% effective. Given the fact that these cut and fill slopes will cover an enormous area, are themselves quite steep, and would be comprised of soil types and fine grained sediments prone to erosion, the Commission considers these high expectations for hydroseeding success.

TCA has defined runoff from rainfall that falls directly onto the proposed toll road as "onsite" runoff. It is only for "onsite" runoff that TCA has designed post-construction BMPs that will address erosion, pollution, and sedimentation issues. In the San Mateo watershed, runoff from small storms (storms with a two year return period[90]) will be routed to one of five treatment control BMPs (either media sand filter basins or detention basins), while runoff that exceeds the two year return period will be split from the storm drain system and discharged directly into the existing drainage channel (hence going untreated). There are approximately 30 small drainage channels that currently route runoff from the sub-watersheds into San Mateo and Christianitos Creeks. It is important to note that since all "onsite" runoff is being routed into one of five treatment control BMPs that will discharge into one of five associated discharge channels this will necessarily increase the volume of water within these five discharge channels. Three of these discharge channels will be routed directly to the major creeks, but two of them will be routed to 50 foot wide channels about 1000 feet from the creeks and it is not clear if those discharges will result in increased erosion within these channels.

TCA has provided calculations showing that by treating a two mile portion of I-5 in addition to the proposed toll road, there will be a net decrease in pollutant loading over the watersheds impacted by the proposed toll road and that section of the I-5. Nevertheless, a quick review of the effectiveness of the BMPs indicates that automotive pollutants will still be discharged from both roads. Although BMPs are the basis for a national strategy to reduce the impacts of stormwater and nonpoint source pollution, they are not 100% effective. According to the Caltrans BMP Retrofit Pilot Program Final Report (CTSW-RT-01-050), also cited by TCA, the proposed sand media filters can be expected to trap about 90% of suspended sediment, 87% of total lead, and 50% of copper. The proposed detention basins fare even worse trapping only 72% of suspended sediment, 72% of total lead, and 58% of total copper. In other words, the proposed toll road will discharge between 42- 50% of the copper, 13- 28% of the lead, and 10-28% of the suspended sediment generated from automobiles into the San Mateo Creek, San Juan Creek, and San Onofre Creek watersheds. Clearly, the heavy metal impacts would not be completely mitigated. Considering that no toll road currently exists through San Mateo Creek watershed, nor in the watersheds on either side of it, this project will increase discharges of heavy metals and other automobile-generated pollutants into the upper parts of the watersheds even if those pollutants are being reduced in the lowest parts of the watersheds. Given that these heavy metal impacts would not be completely mitigated and will be discharged into a previously unaffected watershed, this is clearly not a watershed benefit as stated by TCA. In addition, as mentioned in the Staff Report, the San Diego Regional Water Quality Control

[90] The two year return period storm is about the same size as the 85th percentile storm event used as the design storm for treatment control BMPs.

Board staff have indicated that BMPs that are proposed by TCA would be required on any portions of I-5 undergoing significant construction.

Finally, TCA's RMP cites flow duration plots at four points (two detention basins and two flow splitters) as evidence of insignificant changes in flow duration between the pre- and post-project conditions. While this type of analysis is helpful for "onsite" runoff, it completely ignores "offsite" runoff. Hence these four plots do not present the complete picture of how the construction of the proposed toll road, and its associated impervious surfaces, will impact the hydrology of the watershed. Therefore this analysis has limited application. PWA has suggested that one possible way to account for both "onsite" and "offsite" runoff would be to to prepare pre- and post-project flow duration curves for each of the existing drainage channels along San Mateo and Christianitos Creeks. This would present a more complete picture of the hydromodification associated with the proposed toll road. PWA further outlines key concerns to be addressed:[91]

1. *How well the drainage network for "offsite" runoff performs to maintain existing drainage patterns within each of the existing drainage channels? Are certain existing drainage channels overloaded with increased runoff while other channels handle less runoff?*
2. *What impact does routing low-flows along long stretches of highway have on the flow duration curves for existing drainage channels downstream of proposed sand media filters and extended detention basins? Will increases in discharge volumes cause destabilization of the five drainage channels downstream of the proposed SFBs and EDBs along San Mateo and Cristianitos Creeks.*

<u>Best Management Practices Summary</u>
TCA asserted in its *Response to CCC Staff Report* that there will not be a new source of fine sediment associated with the proposed toll road. In so doing, TCA has created the difficult task of demonstrating that its RMP for both "onsite" and "offsite" runoff will effectively prevent all potential sources of erosion. As described above, it has not demonstrated that the increased flow from two of the channels discharging onsite runoff will not increase erosion.

Similarly, TCA also fails to ensure erosion will not occur for its "offsite" runoff. The "offsite" runoff, combining runoff from the undisturbed portions of the watershed with runoff from 530 acres of cut and fill slopes, will not be subjected to treatment control BMPs. TCA instead relies solely on source BMPs, such as hydroseeding, to prevent erosion. Undisturbed hillsides have slopes based on an equilibrium between factors that maintain the hillside (such as vegetation and soil cohesiveness) and erosive factors. Removing the topsoil and vegetation weakens the factors holding up the hillside and are likely to cause increased erosions, especially where the finished slopes are as steep as proposed (3 to1). The probability that all of the source BMPs will work 100% effectively 100% of the time, given the magnitude of the

[91] *See* Footnote 1.

area, the soil and slope characteristics, and TCA's track record, is low. Although TCA says that it has learned from mistakes on previous toll road projects, it has not shown that they can conduct the massive grading proposed without significantly impacting sediment transport and water quality. Hence TCA fails to demonstrate erosion will not occur for "offsite" runoff. Any changes to sediment transport will have lasting impacts on the surfing resources downstream at Trestles.

In addition, the Commission would prefer to have the full picture of the impacts of hydromodification. TCA has only prepared an analysis of impacts from "onsite" runoff and has not adequately accounted for impacts from "offsite" runoff.

Lastly, since treatment control BMPs do not typically remove 100% of pollutants there will be an addition of heavy metals discharged into each of the three watersheds along the proposed toll road. Again, this is not a watershed benefit as claimed by TCA.

Watershed Impacts

The Commission notes that the scale used to assess impacts to the watershed is critical. As the Surfrider study revealed, when impacts are assessed at a sub-watershed scale (the scale at which the impacts will be experienced) the results are dramatically different. The lowest sub-watershed is projected to have 70% of its area occupied by the proposed toll road and 29% of its area will become impermeable. Impacts at this scale are clearly not insignificant. In contrast, the TCA study compared projected impacts to a 2 mile segment of the lower San Mateo Creek within the context of the entire 139 square mile watershed. Given the great differences in size between these two areas, it is difficult to see how impacts of any magnitude to these 2 miles could cumulatively affect the much larger 139 square mile area. This is why TCA's study concluded that impacts would be insignificant. The Commission concludes that assessing impacts at the local or sub-watershed level, is not only warranted but essential, particularly because the consequences of underestimating the impact of potentially permanent changes to the watershed, given the significance of Trestles, could be profound.

Summary of High Quality Wave Formation Analysis

In summary, the Commission concludes from the studies reviewed above that the cobbles are essential to the preservation of wave formation. Although the cobbles may continue to descend through their normal routes from their source point in the eastern portion of San Mateo watershed towards the lower San Mateo Creek, their eventual delivery and/or the delivery of the ratio of sediment to cobbles may be reduced. The studies submitted to the Commission neither definitively prove nor disprove that the proposed toll road will impact these deliveries. But the potential for impacts due to an increase in fine sediment appears high and probable. Assurance that fine sediments will not increase is dependent on the proposed BMPs functioning exactly as they have been modeled to function *and* their ability to retain the same grain-size characteristics of sediment that currently exist. TCA contends that its BMPs will function properly and the problems that arose for the SJHTC will not occur again because of BMP improvement. Because TCA has not addressed the issue of grain size or provided the more realistic sub-watershed analysis discussed above, the Commission agrees that, "The

effects of the project on sediment processes, with and without the BMPs, are not addressed sufficiently to assess the project impacts on downstream areas."[92] (Exhibit 21).

The Commission notes that the one attempt in California to create a surfing area as mitigation for lost surfing was the unsuccessful surf reef effort offshore from El Segundo. Surf mitigation may be possible; however such projects would have resource impacts and would replace other existing offshore resources. Surfing mitigation is not a proven science and mitigation for world-class surfing resources has never been attempted.

TCA's Response to CCC Staff Report

TCA submitted six pages of comments regarding the surfing resources in its *Response to CCC Staff Report*. As referenced above, TCA stated that there will be no increase in fine sediment delivery from the proposed toll road and therefore no impact to the surfing resources. TCA limited its reasoning to criticism of the PWA report. As discussed extensively above, the Commission does not agree.

TCA commented that the Surfrider study (authored by PWA) is flawed and that the data presented regarding the percentage of sub-watersheds occupied by the proposed toll road is inflated and should not be relied upon to base conclusions relating to the destabilization of sub-watersheds.

PWA has clarified that the data presented is the percentage of the sub-watershed area **upstream** of the road crossing that will be disturbed by the road prism (or footprint). An upstream watershed is defined as the area draining to the proposed road crossing culvert. For example, TCA points out that sub-watersheds SM-04 and C-13 are listed as being 100% occupied by the road prism. TCA argues that this cannot possibly be true because simply looking at the figures provided reveals they are not. However TCA has misinterpreted the data. The portions of sub-watersheds SM-04 and C-13 that lie upstream of the road crossing are 100% occupied by the road prism, not the entire sub-watersheds.

For example, SM-04 has a total watershed of 219 acres, and an upstream sub-watershed of 29 acres. The proposed road prism will occupy about 29 acres of this upstream sub-watershed area. This indicates that 100% of this portion of the sub-watershed will be disturbed by the proposed road prism. Similarly, sub-watershed C-13 has an upstream sub-watershed of about 6 acres. The proposed road prism will occupy about 6 acres of this upstream sub-watershed area. This indicates that 100% of this portion of the sub-watershed will be disturbed by the proposed road prism.

PWA also provided the rationale for why calculating the portion of a sub-watershed that lies above the proposed toll road is the best way to assess impacts.[93]

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[92] Philip Williams & Associates, *Orange County Toll Road- Best Management Practices (hereafter "BMP Letter"*, Letter to Mark Rauscher, Surfrider Foundation, May 9, 2007 at 1.

[93] Philip Williams & Associates, *Response to TCA comments on PWA watershed analysis*, Letter to Patrick Kruer, Chairman of the California Coastal Commission, January 17, 2008.

The analysis is conducted in this way because numerous studies have shown that stream channel erosion (which generates fine sediment that is subsequently transported downstream to the river mouth) is highly sensitive to the percentage of the upstream watershed that is impermeable or disturbed (Bledsoe, 2001; Booth, 1990; 1991; Coleman and others, 2005; MacRae, 1992; 1993; 1996). Stream and watershed flows from the sub-watershed upstream of the proposed road crossing will be concentrated and discharged into the receiving creeks and through culverts on the downstream edge of the road prism at this point. We therefore calculated the percentage of the upstream contributing watershed that is disturbed at the point of discharge into the receiving water.

Assessing channel erosion impacts at the point where the proposed project discharges into a receiving water body gives a more accurate measurement of the true scale of project impacts on headwaers tributaries and watersheds. This is especially important in headwaters areas since while these areas constitute a relatively small portion of the total watershed area *for San Mateo Creek, they are the source of most of the eroded* sediment, *the other areas being dominated by sediment transport or deposition. Simply looking at the percentage of the total watershed impacted by impervious area ignores these localized but highly significant stream impacts. Studies in California and elsewhere have shown that the erosion impact to a stream channel is exponentially proportional to the percentage of the upstream watershed that is impermeable (see figure below).*

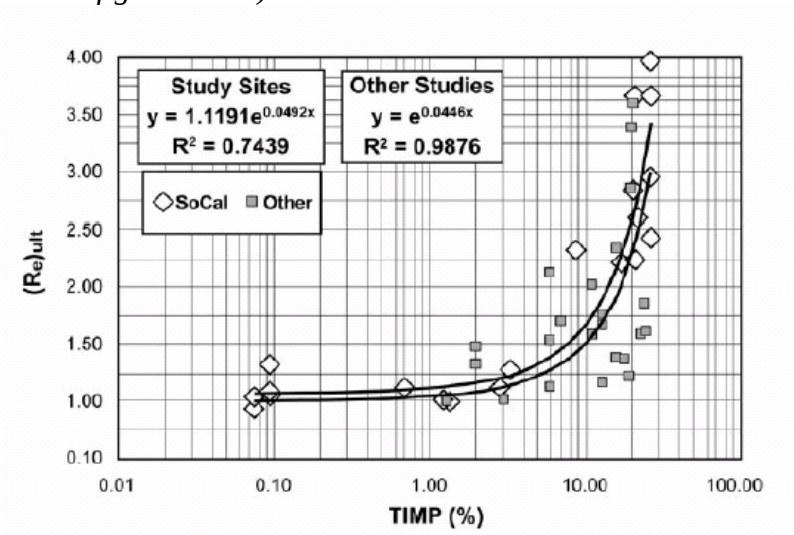

Figure ES-2. Enlargement Curve for Southern California.

Upper curve and data points are for southern California channels in the current study. Lower curve is based on data from other locations in North America.

The figure above (source: Coleman and others, 2005) shows the percentage of a watershed that is impermeable upstream of a point along a channel (TIMP) versus the ratio of channel enlargement through erosion that results (Re). As can be seen,

> *increases in the area of the upstream watershed that is impermeable of between 5-10% cause channels to erode until they have enlarged their volume by 25-50%, with increases in impermeable area between 10 and 20% causing channel sizes to double or more. This process of channel enlargement generates large volumes of sediment that is transported downstream to the main river channel and ultimately to the river mouth.*

The Commission concurs with the methodology presented by PWA and finds that TCA has misinterpreted PWA's data. The Commission therefore continues to rely on this study to demonstrate that impacts at the sub-watershed level will not be insignificant.

The Aesthetic

The aesthetic of Trestles is clearly a precious and irreplaceable resource. Trestles represents the last high quality wave located in the last undeveloped portion of coastline in Southern California that is accessible to the public. The unique coastal conditions at Trestles provide a world renowned surfing experience that cannot be found elsewhere. There are simply no other surf breaks like Trestles.

The aesthetic of Trestles is defined by its water quality and natural setting. As discussed in the *Water Quality* and *Conflict Resolution* sections of this report, the Commission does not accept TCA's assertion that the proposed toll road will improve water quality. First, TCA did not provide baseline information about the current state of the water quality at San Mateo Creek. TCA has not established that there is a water quality problem that needs to be improved. In fact, the San Diego Regional Water Quality Control Board ("RWQCB") asserts that none of the available data suggests an existing water quality impairment at San Onofre or San Mateo Creek. Second, it is the RWQCB's expectation, "… that if I-5 is widened as part of the 241 South project, then post-construction BMPs must be added pursuant to the Caltrans NPDES permit."[94] The proposed BMPs are not "above-and-beyond" what the RWQCB would require for this project, and it is not clear how much more of a substantial benefit they would provide. Also, without baseline data TCA will not be able to not demonstrate the effectiveness of the water quality improvements that occur due to its BMPs. Water quality is more likely to degrade with the introduction of a major new highway along a significant stretch of the creek and watershed. Water degradation stems from the introduction of organic pollutants and micro-pollutants, such as heavy metals, hydrocarbons, and fuel additives entering the watershed. These are mainly generated from traffic activities, component wear, fluid leakage, pavement degradation, roadway maintenance, and atmospheric deposition. These sources of pollution can be temporary, seasonal, accidental, or chronic.[95] BMPs cannot collect all the pollutants as highlighted in correspondence to Surfrider:[96]

> *Because the toll road runs parallel to the creek through the San Mateo Creek watershed, mitigation of the toll road presents unique circumstances. The watershed is*

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[94] *See* Footnote 48.
[95] Han et al., *Characteristics of Highway Stormwater Runoff*, Water Environment Research, Volume 78, Number 12 at 2377.
[96] *See* BMP Letter at 3.

> *rural and undeveloped and therefore any slight change could upset the ecologic balance. The most effective mitigation for the highway under these circumstances may not be the cookie cutter approach generally recommended elsewhere.*

The Commission finds that the natural setting of Trestles would suffer adverse impacts from the proposed toll road through the introduction of highly urbanizing elements. Surfers accessing Trestles currently enjoy a transition from the densely populated cities of Orange and San Diego Counties to a relatively pristine wetlands preserve. The change in the character of the trail that connects San Mateo Campgrounds and Trestles will be significant. Rather than a dirt trail that traverses mostly open space, the new trail TCA proposes will be a paved sidewalk that will run adjacent to Cristianitos Road, the proposed toll road, and rise several stories into the air to cross over the proposed toll road. This will no longer be a natural setting. In addition, the viewshed from the water, as experienced by surfers, will include a view of the elevated proposed toll road. The Commission does not concur with TCA's assessment that this change in viewshed will not be substantial or that this viewshed is not sensitive to change. The entire experience for people surfing will be degraded as setting and viewshed are major factors.

The Commission finds that the proposed toll road would adversely affect the aesthetic of Trestles and that this would degrade the quality of the surfing resource. The Commission further finds that this impact alone renders the project inconsistent with Sections 30220 and 30213 of the Coastal Act.

Indirect Effects
TCA did not assess impacts to CDPR, SOSB, San Clemente businesses, surfers, and visitors because TCA does not believe the proposed toll road will affect the surfing resources. However the Commission believes TCA's analysis was incomplete.

The estimated annual revenue the City of San Clemente derives from surfers visiting Trestles is between $8 million to $13 million per year. The 9 surf contests that take place throughout the year generate additional income as well. These contests raise the profile of Trestles, provide entertainment value to an estimated audience of 1 million, generate revenue for the local Orange County business community, and provide funds to CDPR without which it may not be able to operate at its current level. CDPR has indicated that if construction for the proposed toll road proceeds it may no longer be able to host some or all of the surf contests because of the loss or diminution of its parking facilities. TCA includes Old Highway 101, which functions as the only parking facility during contests, within their staging areas and disturbance limits. The Commission staff requested information from TCA specifically about continued availability of Highway 101 for contest support parking. TCA's response was that it would attempt to avoid effects on parking; however no firm commitment was made for avoidance of this area during surfing contests over the projected 3 year construction phase. Without such a commitment, and no alternative mitigation offered or available, the Commission cannot find the project will avoid effects on the surfing contests at Trestles and, by extension, to CDPR, SOSB, the City of San Clemente and its local businesses, surfers, and visitors.

Conclusion

Assessing potential impacts to systems for which there is only an imprecise understanding is difficult. However the Commission does not consider it a mere conincidence that the best wave in Southern California is found at the mouth of one of the last undeveloped watersheds in Southern California. The Commission finds that there is a link between the two. Given the requirement in Section 30220 that surfing shall be protected, the magnitude of the project, and the value of the resource, the Commission believes a precautionary approach for assessing impacts is therefore warranted.

The proposed toll road will be constructed through three previously undeveloped watersheds. It will introduce 41 million yards of cut and fill, expose 530 acres of wide and steep cut and fill slopes to the elements and hillslope erosion, and create 136 acres of impervious surface. Whether its impacts can be mitigated 100% as stated by TCA is highly questionable.

The Commission concludes it is quite probable that an increase in fine sediments will occur because there is a potential for erosion to occur for both “onsite” and “offsite” runoff. These fine sediments may blanket the cobbles lining the bottom of the San Mateo Creek because it is transport capacity-controlled as noted earlier. During large storm events, this increase in fine sediment will reduce cobble transport and delivery and/or alter the ratio of fine sediment to cobbles delivered to the mouth. Additionally, the flow velocities in the San Mateo Creek are likely to be reduced as a result of the treatment BMPs. Any reduction in these peak flow rates will affect cobble delivery to the nearshore. Either result will impact the continued existence of the cobble delta and the persistence of the high quality wave formation at Trestles. Therefore, the Commission concludes that the proposed toll road will likely affect the specific mix of sediments, sands, and cobbles thus resulting in an impact to the surfing resources. The Commission takes these potential impacts very seriously because they are irreversible-- there is no way to mitigate for the loss of the surfing resources if the impacts were to occur.

TCA acknowledges that the only assurance it can provide to the Commission that this project will not increase fine sediments is 100% contingent upon the success of the proposed BMPs. This would include successful implementation, maintenance, and emergency repairs for all BMPs for the lifetime of the proposed toll road. TCA has assured the Commission this is possible, despite the fact that Caltrans will be responsible for BMP maintenance. The Commission disagrees with TCA and finds its confidence has not been borne out by the evidence presented to date.

The Commission finds that TCA has not adequately demonstrated that surfing at Trestles will be protected if the toll road is built. In addition, the Commission finds that the proposed toll road would adversely affect the aesthetics. Because TCA cannot provide assurance to the Commission that the high-quality waves will be protected, and because the Commission has determined that the aesthetics will not be protected, the Commission concludes that the proposed toll road is inconsistent with Section 30220.

Section 30213 requires that lower cost recreational facilities shall be protected. Impacts to the surfing resources would clearly affect a low-cost recreational activity. The Commission finds the proposed toll road would adversely effect, either directly or indirectly the surf community, beachgoers, residents and visitors, the City of San Clemente and its local businesses, and SOSB. Thus using the same reasoning discussed above regarding Section 30220, the Commission also finds the proposed toll road inconsistent with Section 30213.

E. <u>Water Quality.</u>
Section 30230 of the Coastal Act provides:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act provides:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

TCA's consistency certification provides the following water quality discussion:

> ***Summary.*** *FTC-S is consistent with Section* ***30231*** *of the Coastal Act requiring the maintenance of biological productivity and quality of coastal waters, streams, wetland, estuaries, and lakes by providing storm water runoff treatment where it currently is not present through the construction of bioswales and extended detention basins and thereby improving water quality over present conditions, following construction mitigation measures to reduce construction impacts to streams, not impacting groundwater resources, and minimizing the alteration of natural streams.*
>
> ***Improvement of existing water quality.*** *As discussed in detail above, coastal waters and wetlands are currently degraded by untreated runoff from several miles of the I-5 freeway. The receiving waters in the vicinity of FTC-S are San Mateo Creek and San Onofre Creek, which discharge directly into the Pacific Ocean. Roadway runoff along this segment of the I-5 currently is not treated by any storm water pollution control facility (Focused Summary, Section 4.1.1). Nearly one million gallons of runoff per design water quality storm event from existing I 5 would receive treatment with the construction of FTC-S. Over the past two years of record, approximately five design water quality events have occurred annually. Using this estimate,* ***the project would treat approximately five million gallons of water each year that currently flow untreated from existing I-5 into San Onofre and San Mateo Creeks, and ultimately, the Pacific Ocean.***

TCA's supplemental Section 30230 analysis stated:

> ***Summary.*** *FTC-S is consistent with Section* ***30230*** *of the Coastal Act requiring the maintenance, enhancement, and restoration of marine resources by significantly improving coastal water quality from existing conditions and not affecting sediment transport in coastal waters. Because of the incorporation of water treatment infrastructure to a segment of I-5 that currently drains untreated storm water runoff from the road into the San Mateo and San Onofre Creeks, FTC-S will enhance the biological productivity of coastal waters.*
>
> ***Improvement of existing water quality.*** *Currently, coastal waters are degraded by untreated runoff from several miles of the I-5 freeway. The receiving waters in the vicinity of FTC-S are San Mateo Creek and San Onofre Creek, which discharge directly into the Pacific Ocean. Currently, roadway drainage from I-5 in this area consists of a series of storm drains and inlets that outlet to longitudinal surface ditches draining directly to San Onofre and San Mateo Creeks without storm water treatment. Along I-5, Basilone Road marks the drainage area boundary between the storm drain system that conveys flow southward to San Onofre Creek and the system that conveys flow northward to San Mateo Creek. Along the existing Cristianitos Road, east of I-5, pavement drainage flows via sheet flow and over side drains to the adjacent hillside, the north bank of San Mateo Creek. This runoff currently has no storm water pollution control facilities and eventually, drains to the Pacific Ocean (Focused Summary, Section 4.1.1). Nearly one million gallons of runoff per design water quality storm event from existing I-5 would receive treatment with the project. Over the past two years of record, approximately five design water quality events have occurred annually. Using this estimate,* ***the project would treat approximately five million gallons of water each year that currently flow untreated from existing I-5 into San Onofre and San Mateo Creeks, and ultimately, the Pacific Ocean.***
>
> *Water quality of marine resources and coastal waters will be improved along I-5 by installation of (1) runoff interception and conveyance systems for both on-site and off-site drainage, (2) water pollution prevention control facilities, and (3) water pollution treatment control facilities.*

Coastal Commission Analysis

The applicants' observations that the stormwater from the described sections of I-5 are currently untreated appear to be valid. Although it did not provide evidence of measurable degradation by highway-generated pollutants, impacts to marine resources or biological productivity, it is reasonable to expect that the lower portions of the San Mateo and San Onofre creeks would be adversely impacted by stormwater runoff. TCA's estimation that it could install BMPs to treat five million gallons of stormwater per year is reasonable.

Nevertheless there is no way to evaluate whether the installation of these BMPs will provide a measurable improvement to the water quality and biological productivity in these creeks without a comprehensive baseline study. Baseline data should be provided consistent with the commitments of the EIR, see for example EIR Table 4.9-6. The limited information on water quality in these creeks shows that they have good water quality and better than most streams in Southern California. Although there have been infrequent low scores on Heal the Bays Beach Report Card for some portions of San Onofre State Beach, the beach water quality is very good most of the time. The Beach Report Card scores are based on bacterial indicators, which are unlikely to come from highways, and can be caused by discharges of lagoon waters into the ocean even in the absence of human pathogens.

Since BMPs are not 100% effective at removing pollutants and no toll road currently exists through San Mateo Creek watershed and the watersheds on either side of it, this project will increase discharges of heavy metals and other automobile-generated pollutants into the upper parts of the watershed even if those pollutants are being reduced in the lowest parts of the watersheds. Before considering the addition of structural BMPs to a portion of I-5 as mitigation for water quality impacts in the San Mateo creek watershed, a comprehensive baseline monitoring program for biological productivity and water quality conditions would be required.

In addition, the San Diego Regional Water Quality Control Board staff has indicated that BMPs that are proposed by TCA would be required on any portions of I-5 undergoing significant construction. In order for the BMPs to be considered to offset automotive pollutants higher in the watershed, they would have to be installed on portions of the freeway that are adversely impacting coastal waters and are not slated for improvements that would otherwise require installation of structural BMPs.

TCA Description of the Interception and Conveyance System

> ***Runoff Interception and Conveyance Systems (On-Site Drainage).*** *Roadway, or "on-site" drainage, along I-5 from the north side of San Mateo Creek to a point southward approximately two miles, will be retrofitted to provide storm water treatment to on-site runoff. This will be accomplished by constructing storm drain systems along I-5 and along the proposed FTC-S/I-5 connectors that will tie into the existing storm drains. This storm drain network will consist of two systems, the first conveying storm water to Sand Filter Basin (SFB)*[97] *adjacent to San Onofre Creek ("System 1") and the second conveying storm water to an SFB adjacent to San Mateo Creek ("System 2").*
>
> *System 1 runs along I-5 from Basilone Road southward for approximately 1.5 miles, conveying flows to the east side of I-5 into a 3.7 acre-feet extended detention basin located at the south embankment of San Onofre Creek. After treatment, the SFB will*

[97] The Extended Detention Basins in the Coastal Zone described here for "System 1" and "System 2" are now proposed to be replaced with Sand Filter Basins, which are discussed below.

outlet into a pipeline routing the treated runoff to San Onofre Creek. For erosion control, the outlet will consist of a 100 square foot riprap energy dissipater located on the south embankment of San Onofre Creek (Focused Summary, Section 4.1.2).

System 2 includes a storm drain system running along I-5 from Basilone Road northward to San Mateo Creek, conveying flows to the east side of I-5 where it will connect to a SFB located on the south side of San Mateo Creek. After treatment, the SFB will outlet into a pipeline routing the treated runoff to San Mateo Creek. For erosion control, the outlet will consist of a 100 square foot riprap energy dissipater located on the south embankment of San Mateo Creek. System 2 will also include storm drains at the toe of the embankment along the east side of I-5 to convey storm flow from the above-grade FTC-S Connector structures. Deck drainage from these bridges will be routed down columns, outletting to the System 2 storm drains. All System 2 storm drains will connect to the SFB prior to discharge into San Mateo Creek (Focused Summary, Section 4.1.2).

On-site runoff for the area north of San Mateo Creek, at the Cristianitos Road crossing will be conveyed to treatment BMPs via storm drain systems equipped with flow splitters that capture and convey water quality flows to the BMPs and allow peak flows to continue on their original flow path. In this way, the on-site low flows and off-site flows are always separated. Treatment BMPs in this vicinity include a detention basin and a series of biofiltration swales (Focused Summary, Section 4.1.2).

Two storm drain systems (Systems 4 and 5) intercept and convey the on-site runoff in this area. System 4 includes a series of pipelines that direct flow from the shoulders into the median where a series of 300-feet long biofiltration swales will treat storm water runoff. The swales will outlet into grated catch basins that connect to the offsite System 3, which ultimately outlets to San Mateo Creek after water treatment.

System 5 includes a storm drain system that intercepts and conveys on-site runoff to a 1 acre-foot SFB located 2,500 feet north of the San Mateo Creek crossing. Where possible, this system is equipped with flow splitters that convey water quality flows to the SFB which outlets to off-site System 3 (Focused Summary, Section 4.1.2).

Runoff Interception and Conveyance Systems (Off-Site Drainage). *Storm water drainage that does not come from the roadway, or "off-site drainage", is conveyed by San Onofre and San Mateo Creeks under the I-5 at its bridge structures. Proposed improvements at San Onofre Creek consist of widening the existing bridge structure on both the upstream/northbound side (42.5 feet to 52.0 feet) and on the downstream/southbound side (37.0 feet to 52.7 feet) of I-5. The widened structure would be constructed on pier walls similar to the existing structure, with the same two foot width as the existing pier walls. The proposed widening creates an increase in water surface of 0.6 feet at the upstream face of the proposed bridge widening. The increase*

diminishes to 0 approximately 66 feet upstream of the bridge (Focused Summary, Section 4.2.2).

Proposed improvements at San Mateo Creek include construction of two connector bridges to FTC-S over San Mateo Creek, upstream of the I-5 bridge structures. The northbound bridge structure (northbound I-5 as it transitions to northbound FTC-S/SR-241) over San Mateo Creek will be approximately 3,860 feet long with 15 column supports. The bridge crosses San Mateo Creek at a skew angle ranging from 45 degrees at the creek crossing to approximately 70 degrees near the north abutment. The southbound bridge structure (southbound FTC-S/SR-241 as it transitions to southbound I-5) will be approximately 3,910 feet long with 14 column supports. The bridge crosses San Mateo Creek at a skew angle ranging from 60 degrees at the creek crossing centerline to approximately 70 degrees near the north abutment. The proposed bridges will result in a maximum increase in water surface elevation of 0.4 feet upstream of the I-5 bridge structure, diminishing to zero approximately 0.75 mile upstream of the proposed bridge structures (Focused Summary, Section 4.2.2).

The proposed off-site system for storm water generated uphill of FTC-S and Cristianitos Road consists of culverts and longitudinal ditches that intercept and convey surface water. The culverts are designed to pass the 10-year flood without causing the headwater elevation to rise above the inlet top of culvert and to pass the 100-year flood without causing objectionable backwater depths, outlet velocities, or ponded water outside the right-of-way. One 36-inch cross-culvert is proposed where a major flow path is located along the hillside approximately 5,000 feet north of the San Mateo Creek crossing. South of this location, off-site runoff consists mainly of sheet flow, which is intercepted and conveyed through a storm drain system (designated as System 3) to a riprap lined section of San Mateo Creek located immediately north of I-5 (Focused Summary, Section 4.2.2).

Coastal Commission Analysis

This description of the interception and conveyance system appears to be current except that three of the extended detention basins have been replaced with sand filter basins because these BMPs, although more expensive to build and maintain, are more effective at treating typical highway pollutants.

TCA Description of Water Pollution Control Elements

Water Pollution Prevention Control Elements. *Several Best Management Practices (BMPs) for the prevention of water pollution are incorporated into FTC-S, including the incorporation of flow-splitters, protection-in-place of desirable vegetation, the use of rock slope protection and other erosion prevention measures, and soil stabilization strategies.*

In order to mimic pre-project flows, inlet flow splitters have been incorporated into the design of the storm drain systems. The flow splitters capture and convey water quality flows to extended EDBs or SFBs and allow peak flows to continue on their original flow path (Water Quality Technical Report Update, Section 6.1). In general, the project would result in a minor increase in impervious surface in the watersheds for San Onofre and San Mateo Creeks, which can be expected to translate into minor localized increases in runoff. However, lag time between the peak runoff of these major streams and that from the freeway runoff is large, i.e. the peak flow from the freeway will have substantially subsided by the time the watershed peak occurs. This, coupled with the minor increase in impervious surface (approximately 0.2 percent of the San Mateo Creek watershed and less than 0.1 percent of the San Onofre Creek watershed), results in an insignificant increase in peak flows found in San Onofre and San Mateo Creeks (Focused Summary, Section 6.1).

Additionally, existing desirable vegetation and landscaping will be protected in place, where possible. The project will include demarcation of the limit of disturbed soil area during construction to ensure that adjacent vegetation is preserved (Focused Summary, Section 6.2).

Risks due to erosion or washout will be minimized through the use of rock slope protection, hydroseeding, ground cover, mulch, and longitudinal ditches and down drains. Velocity dissipation devices, flared end outlets, headwalls, transition structures, and splash walls will be incorporated into the design where necessary at culvert inlets and outlets to prevent erosion. Lined longitudinal ditches will be incorporated at the uphill side of FTC-S to intercept sheet flow where necessary and to convey it to culverts or bridges that cross under the roadway. Culvert outlets will be equipped with appropriate energy dissipating devices (Focused Summary, Section 6.3).

Various slope and surface protection measures will be used to address site soil stabilization and reduce deposition of sediments in the adjacent surface waters. Typical measures include the application of soil stabilizers such as hydroseeding, rock slope protection, velocity dissipation devices, flared end sections for culverts and others. The project will be constructed to minimize erosion by incorporating retaining walls to reduce the steepness of slopes or to shorten slopes; providing cut and fill slopes flat enough to allow re-vegetation and limit erosion to pre-construction rates; and by collecting concentrated flows in stabilized drains and channels. Energy dissipaters in the form of riprap, impact basins or velocity control rings will be provided at storm drain outlets to control erosion. Riprap sizes and thicknesses will be shown on the plans and stone gradation/ placement methods will be defined in the specifications (Focused Summary, Section 6.4).

Water Pollution Treatment Control Elements. *BMPs for pollution treatment will be designed and implemented to reduce the discharge of pollutants from the on-site storm drain system for all highway runoff from FTC-S and two miles of I-5, to the maximum extent practical, consistent with objectives set forth by Caltrans before discharging to natural channels. Currently, runoff from I-5 in this location is not being treated. Treatment BMPs considered feasible and practicable for the project include extended detention basins (EDBs), sand filter basins (SFB) and biofiltration swales (Focused Summary, Section 7.1).*

As described above, two SFBs are proposed within the coastal zone; one proposed adjacent to San Onofre Creek and one adjacent to San Mateo Creek. The runoff area tributary to the San Onofre Creek SFBs is 62 acres, which includes those sections of I-5 and FTC-S from Basilone Road to the south. The runoff area tributary to the San Mateo Creek SFBs is 41 acres, which includes those sections of I-5 and FTC-S from the San Mateo Creek crossings southward to Basilone Road. The water quality volumes are 3.7 acre-feet and 2.5 acre-feet for the San Onofre Creek SFBs and San Mateo Creek SFBs, respectively (Focused Summary, Section 7.1).

Three biofiltration swales are proposed within the coastal zone. These will be located immediately north of the FTC-S crossing of San Mateo. Here, the vegetated trapezoidal swales will be located in the median of FTC-S at a slope of less than two percent, with 4:1 side slopes and lengths ranging from 200 to 500-feet. Swales will be designed to Caltrans standards which require water quality flow velocities (equal to the flow generated from the 85th percentile storm) to be low enough to keep hydraulic residence times in the swale greater than 5-minutes. The swales will be vegetated with native grasses and will treat runoff from FTC-S for the area north of San Mateo Creek from the connector structures to the Cristianitos Road crossing. The downstream ends of the swales shall connect to grated inlet structures which outlet to an adjacent off-site storm drain system (that ultimately conveys the treated flow to the north bank of San Mateo Creek) (Focused Summary, Section 7.1).

<u>Coastal Commission Analysis</u>

- The Coastal Commission finds that it is critical for this project that existing hydrologic functions be maintained in order to mimic the current conditions sediment transport, hill slope erosion and water quality. TCA has indicated that it believes it can match that hydrology using flow splitters to convey offsite runoff and onsite runoff exceeding the two year return frequency storm under the Toll Road to existing creeks and channels. Opponents of the project have made arguments that the analysis used by TCA to show that it can mimic the hydrology is "somewhat misleading." For example, a Philip Williams & Associates letter to Chairman Kruer, dated January 22, 2008 (Exhibit 6 of the list of exhibits included with the first addendum to the original staff report) stated:

Hydromodification is the effect that the addition of impervious surfaces has on stream

channels that may result in the erosion/sedimentation caused by increased runoff. The TCA attempts to address hydromodification concerns in the SR-241 RMP by presenting flow duration plots for two flow splitters and two of the EDBs along San Mateo Creek. The flow duration plots are meant to show that the duration of the range of flows modeled over a 20-year period does not significantly change between the pre-project and post-project with EDB scenarios. However, the flow duration plots are somewhat misleading in that they actually represent the discrete discharge from the flow splitters and EDBs for "onsite" highway runoff. By examining hydrologic modeling results only at the discharge of specific BMPs, the total impacts associated with the entire project including the "offsite" and "onsite" runoff management strategies cannot be determined.

Modeling used by TCA is of a scale and accuracy more appropriate for flood control than for balancing the competing needs of flood control and protection of water quality. Given the potential consequences in this watershed, TCA needs to fully demonstrate that it can mimic the existing hydrological functions and that this is the most appropriate model for addressing potential impacts to biological productivity and water quality.

- The Coastal Commission finds that given the risk associated with this project to biological productivity and water quality associated with this project a comprehensive monitoring program for those resources is required. The monitoring plan should enable TCA and others to evaluate the current hydrologic, biological productivity and water quality baselines and monitor changes to those resources caused by the project. In addition, a contingency plan is required that proposes corrective actions that will be taken if the proposed project is shown to have adverse impacts on the hydrologic functions, biological productivity or water quality of the San Mateo, San Juan or San Onofre watersheds based on the comprehensive monitoring plan.

  TCA has stated above that " *the project would result in a minor increase in impervious surface in the watersheds for San Onofre and San Mateo Creeks, which can be expected to translate into minor localized increases in runoff" and that the "minor increase in impervious surface (approximately 0.2 percent of the San Mateo Creek watershed and less than 0.1 percent of the San Onofre Creek watershed), results in an insignificant increase in peak flows."* Opponents to the project have pointed out that because of the specifics of this project (below) that impacts of the development need to be considered at the subwatershed scale. In fact, TCA's preferred alternative would cross 20 subwatersheds draining to San Mateo creek and disturb as much as 100% of the individual subwatershed areas (Philip Williams & Associates letter to Surfrider dated January 11, 2006). Another PWA letter commenting on the Toll Road Runoff Management Plan and dated January 22, 2008 (Exhibit 6 of the list of exhibits included with the first addendum to the original staff report) states the following:

> *The proposed highway will have major impacts to 20 individual subwatersheds that currently have little development and related impervious area and drain to small channels that convey runoff to San Mateo Creek and Cristianitos Creek. These sand and silt dominated watersheds and related stream systems have developed in equilibrium with the existing rainfall-runoff dynamics. These fragile watersheds are prone to instability and rapid degradation with relatively minor changes in runoff patterns caused by changes in land use. Introducing a new highway through these undeveloped watersheds is likely to result in drastic impacts to both sediment production and channel habitat structure. Thus, the proposed SR-241 with the associated 41 million yards of cut and fill, 530 acres of wide exposed cut and fill slopes, and over 136 acres impervious surface could easily cause potentially significant impacts in the San Mateo Creek watershed.*

- TCA plans to use source control BMPs such as rock slope protection, hydroseeding, ground cover, and mulch, to keep from increasing the supply of fine sediments to the creeks. This appears to to be an unreasonable expectation given the removal of topsoil, final slopes of 3H:1V, the landslide prone nature of this part of the coast and TCA's past performance. The Commission notes that these source control BMPs would have to be extremely effective to keep the cut and fill slopes from becoming a new source of fine sediment because there are no detention basins or any other type of treatment control BMP proposed as a backup to the source control BMPs for the offsite runoff. Without detailed plans showing how TCA will ensure its source control BMPs will prevent increases in sediment supply to the creeks, the Commission is not convinced that TCA can "virtually eliminate" additional contributions of fine grained sediment to the creeks, as it claims.

- Undisturbed hillsides develop slopes based on the equilibrium between factors that stabilize the hillside (such as vegetation and soil cohesiveness) and erosive factors. Removing the topsoil and vegetation weakens the factors holding up the hillside and are likely to cause increased erosion, especially where the finished slopes are as steep as proposed (3 to1). Although TCA says that it has learned from mistakes on previous toll road projects, it has not shown that it can conduct the massive grading proposed without significantly impacting sediment transport and water quality.

- A comprehensive monitoring plan designed to demonstrate the effectiveness of this project's erosion control features, coupled with a feedback mechanism to ensure that any adverse impacts to the San Mateo or San Onofre watersheds are corrected, is needed for the project to be protective of biological productivity and water quality.

<u>TCA description of Storm Water Pollution Prevention Plan Elements</u>

> ***Mitigation of Water Quality Construction Impacts.*** *Mitigation measures and storm water regulations will protect marine resources from adverse water quality impacts from construction. Section 402(p) of the Water Quality Protection Act of 1987 requires*

that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for construction projects that disturb more than one acre of land as part of the National Pollution Discharge Elimination System (NPDES). In California, the State Water Resources Control Board (SWRCB) is responsible for implementing this requirement through the RWQCB and Caltrans (Focused Summary, Section 3.1).

TCA is required to obtain coverage under the Caltrans Construction General Permit for discharge of storm water from a construction activity prior to the start of construction of the project. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared once final design documents are available. The selection of construction Best Management Practices (BMPs) will be determined as a part of the development of the SWPPP; however the Final SEIR and supporting technical documents describe the following general construction BMPs for the project (Focused Summary, Section 5.1):

- Source identification and control (through covering and containing) of potential pollutants
- Erosion control techniques for temporary, permanent and wind conditions. Types of erosion control to be considered include rolled erosion control products (RECPs) and hydraulically applied mulches.
- Sediment control techniques with the specific objective of maintaining sediment loads consistent with pre-construction levels. Types of sediment control BMPs to be considered include fiber rolls, silt fence, drainage inlet protection and sediment traps and basins.
- Control of non-storm water through elimination of sources.

In addition, the RMP stipulates that the SWPPP include a storm water runoff sampling plan to ensure that BMPs are functioning effectively during construction (Focused Summary, Section 5.1).

The temporary residual increased sediment loads from construction areas are unlikely to alter the hydrologic response (i.e., erosion and deposition) downstream in the San Juan Creek and San Mateo Creek watersheds and, subsequently, the sediment processes in these watersheds. With implementation of the Storm Water Management Plan (SWMP) and SWPPP, there is minimal potential for impact in the southern part of the San Onofre Creek watershed upon construction of the Proposed Project (Focused Summary, Section 4.9).

Coastal Commission Analysis

This description of the Stormwater permit and Storm Water Pollution Prevention Plan (SWPPP) requirements appear to be accurate. No SWPPP or adequate storm water runoff sampling plans have been submitted to the Coastal Commission. Although the final versions of these documents are often submitted by the selected contractor shortly before start of construction the Commission typically requires that a conceptual SWPPP describing the types and applications of construction stormwater BMPs that are applicable to the specific

construction site issues and a conceptual storm water sampling plan, indicating likely methods, locations, frequency and duration of sampling, be submitted for approval by the Executive Director before major projects can be authorized or consistency with Coastal Act policies can be determined.

Regional Water Board Concerns:
TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices (BMPs) and treat additional runoff from two miles of I-5.[98] On September 17, 2007, TCA submitted it's most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff.

San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, because their watersheds are far less developed than most southern California watersheds. The BMPs that TCA proposes to construct on I-5 may help offset impacts on the watershed from the increased runoff and pollutant loadings from 8-9 miles of highway being constructed along San Mateo Creek and its tributary, Cristianitos Creek, but it is not clear how a benefit over current conditions in San Mateo or Cristianitos Creeks would be provided by this project. Even if BMPs on non-project roads can reduce the total loading of pollutants in the watershed, BMPs are not 100% efficient and the toll road will introduce a new and significant source of pollutants upstream from I-5 in the San Mateo, San Onofre and San Juan creek watersheds. In addition, while TCA states it is providing these collection facilities voluntarily, and beyond what would be required for its project, the San Diego Regional Water Quality Control Board (RWQCB) refutes this assertion, stating (letter dated September 24, 2007, Exhibit 22) that because the project includes improvements along I-5, and because State Water Board policies require installation of BMPs when improving existing roads that:

> *Our expectation is that if I-5 is widened as part of the ... [proposed toll road], then post construction BMPs must be added pursuant to the Caltrans NPDES permit. It is unclear at this point whether TCA is proposing to treat runoff from a larger section of I-5 than would be required by the Caltrans NPDES permit.*

The RWQCB further states that none of the available data suggest an existing water quality impairment, that the lower portions of San Onofre and San Mateo Creeks have not been proposed to be listed as impaired, and, further, that:

> *Quantifying benefits from the proposed project is difficult without baseline data. Baseline data are currently lacking for both runoff quality and receiving water quality. The current pollutant loading from the I-5 highway and expected reductions from the proposed storm water detention basins may be estimated from existing Caltrans*

[98] Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 (hereafter "Consistency Application") at 33.

> *studies. Estimating the environmental benefits, however, requires pre-project data that are not available.*

Concerning TCA's latest Runoff Management Plan (dated July 26, 2007), the RWQCB stated in a letter dated September 24, 2007 (Exhibit 22), that TCA had not provided sufficient information to enable the RWQCB to review the adequacy of the plan to protect water quality. The RWQCB requested additional information including additional evaluation of media filters for the San Mateo and San Onofre Creek EDBs. TCA responded to the RWQCB's request on January 4, 2008. In response to the RWQCB's request for information on the applicability of Sand Filter Basins (SFBs), TCA agreed to substitute SFBs for three Extended Detention Basins (EDBs) without providing the requested analysis. Although SFBs are more expensive to install and maintain, they are more effective at removing highway pollutants and will provide better quality runoff to the lower reaches of San Mateo and San Onofre creeks.

Based on the RWQCB's concerns, it would appear premature for the Commission to concur with TCA's water quality assessment that the project is consistent with Sections 30230 and 30231 of the Coastal Act. As noted above, the Commission staff will prepare an addendum to supplement this analysis.

Conclusion

Based on the concerns described above, it would be premature for the Commission to concur with TCA's water quality assessment that the project is consistent with Sections 30230 and 30231 of the Coastal Act.

EXHIBIT G

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Re: Comments on Final SEIR and Related Findings for the SOCTIIP Project

On behalf of the Sierra Club, Endangered Habitats League, Natural Resources Defense Council, Sea and Sage Audubon Society, Audubon California, Surfrider Foundation, Defenders of Wildlife, and the California State Parks Foundation, we submit the following comments on the December, 2005 Final Supplemental Environmental Impact Report ("FEIR"), and related findings, for the South Orange County Transportation Infrastructure Improvement ("SOCTIIP") Project.

Our comments consist of this letter and two separately bound volumes submitted herewith: Volume 1 (Consultant Reports), which includes a number of technical reports, and Volume 2 (Exhibits), consisting of exhibits containing supplemental materials. We urge TCA to carefully consider all of the submitted materials before taking action on the proposed Project.

INTRODUCTION

Our comments below, and those contained in the separately submitted Consultant Reports (Volume I) document extensive flaws in the environmental documentation for the proposed Project. However, these comments do not reflect all of the documents' inadequacies. The FEIR/Response to Comments document alone totals

well over 5,000 pages, and was released just before the year-end holidays. Another 250 pages of findings was released only days ago. Accordingly, these comments identify only the most glaring shortcomings that were ascertainable in the limited time available for review.

Given the huge volume of material, we had requested that the public be given a minimum of 45-90 days prior to the hearing for review. We also requested that at least one hearing be scheduled at a time and location that would enable full public participation, particularly by working families (i.e., evenings or weekends, in San Clemente). Despite the extraordinary public interest in this project, none of these requests was granted. We remain deeply concerned that TCA is moving this project forward without adequate public disclosure and input. We urge the Board to continue the hearing for at least another 30 days so that it can consider these and other comments on the FEIR, and to allow interested persons a reasonable opportunity to testify prior a decision on the project.

What is clear is that despite its large size, the FEIR fails to adequately address the enormous environmental impacts of the preferred alternative. Some of the most obvious and egregious impacts of the project – impacts to San Onofre State Park, to critically endangered species such as the Pacific pocket mouse – continue to be virtually ignored or downplayed. For impacts acknowledged as significant, the proposed mitigation is generally non-specific, with the crucial details deferred to a future date, making it impossible to assess whether impacts would be lessened. Much of the proposed mitigation – such as in kind replacement of lands that are already dedicated for conservation purposes (e.g., the Donna O'Neill Land Conservancy) – is completely illusory.

The FEIR's failure to adequately describe and mitigate the environmental impacts of the preferred alternative is only one of the ways inaccurate information has been presented in a manner that is biased toward that alternative. TCA has long justified its promotion of this environmentally devastating alternative over the far more logical option of expanding capacity along the exiting Interstate-5 corridor by claiming that I-5-focused alternatives would require displacement of a huge number of homes and other buildings, and are therefore economically and socially infeasible. No evidence has ever been provided to justify this claim. We now have clear evidence that shows that the number of buildings that would be displaced by one such alternative (AIP) within the critical San Clemente segment is more than 10 times lower than represented by TCA. Yet, TCA's drastic misrepresentation of displacement impacts had effectively eliminated

the AIP alternative from consideration, despite its obvious environmental and traffic benefits.

These and other problems identified in this letter and the enclosed reports indicate that the proposed project is nowhere near ready for consideration by the Board. The EIR must be revised to provide a true accounting of the impacts of the preferred alternative and include specific, binding mitigation to reduce those impacts to the fullest extent feasible. Just as importantly, in light of the new information indicating the clear viability of I-5-based alternatives, the Board should direct staff to fully consider a range of options that focuses on improving the existing I-5 corridor while minimizing displacement, and to include these alternatives in the environmental analysis. Certification of the EIR and approval of the project based on the current record would violate CEQA.

DISCUSSION

I. The EIR's Analysis of the Feasibility of Alternatives Is Unsupported by Substantial Evidence.

The FEIR's conclusions and TCA's proposed findings that non-toll road alternatives are infeasible are indefensible based on the evidence in the record and are therefore invalid under CEQA.

From the outset of the environmental review process, the EIR dismissed as infeasible certain alternatives—such as adding one additional lane on either side of Interstate 5 with selected arterials improvements in South Orange County ("AIP alternative")—that would avoid virtually all of the devastating environmental impacts of the toll-road alternatives, and yet would provide comparable or superior traffic benefits. The AIP alternative, for example, was not even brought forward for detailed consideration in the EIR. The primary reason for this summary rejection was TCA's conclusion that construction would require the displacement of hundreds of homes and other existing structures (including 280 buildings in San Clemente alone), and that funding to meet these vast expenses could not be identified. (DEIS/SEIR at 2-73; FEIR at 2-84.)

These rationales are demonstrably false. They are based on conclusions completely lacking in evidentiary support. The EIR's alternatives analysis must therefore

be completely revised, re-circulated, and any resulting findings thoroughly reconsidered to comply with CEQA.

A. The EIR Summarily Rejected an Alternative Combining Limited Improvements to the I-5 and Selected Arterials Based On Demonstrably Erroneous Claims Of Displacement Impacts and Associated Funding Shortfalls.

1. Erroneous Information Concerning Taking Of Homes and Other Structures.

Based on a December 2003 Relocation Impacts Technical Report, TCA concluded that the AIP Alternative would require the taking of many hundreds of homes and other structures located on private property, including 280 structures in the City of San Clemente alone. The basis for the displacement calculations was not provided anywhere in the technical report, in the EIR, or in any other technical document. The public was left with no way to determine whether these numbers had any basis in fact. Nevertheless, the numbers were used as a basis for concluding that the AIP and several other I-5-focused alternatives were infeasible.

The coalition then sought to obtain this information through a Public Records Act request. (See Vol. 2, Ex. 18.) But none of the documents supplied in response to that request provided any basis for the reported displacement impacts along the I-5 or arterials. TCA has confirmed that there are no other documents relating to displacement in their files. (Vol. 2, Ex. 21.)

Having exhausted all means of obtaining an explanation of the basis of these impacts from the TCA, the organizations submitting this letter retained Peter Bekey, President of KCA Engineering and a seasoned civil engineer with over a half-century of experience evaluating road widenings, to assess displacement impacts. Because of time and resource constraints, we asked him and his firm to focus on displacement impacts along I-5 in the City of San Clemente. This segment was chosen because the TCA relocation study had concluded that San Clemente was by far the most constrained segment in terms of the number of displacement impacts. Additionally, none of the arterials improvements proposed as part of the AIP alternative would take place in the City of San Clemente, thus permitting the analysis to focus exclusively on I-5.

KCA Engineering was instructed to assess the impact on structures of adding one lane in either direction on I-5 based on existing conditions. To ensure consistency with TCA's future baseline assumptions, the firm was also instructed to assume build-out of planned improvements to I-5 in San Clemente contained in the Regional Transportation Plan (i.e., an HOV lane in either direction) before adding the additional lane in either direction.

Mr. Bekey then performed an intersection-by-intersection and interchange-by-interchange displacement analysis, personally observing each segment and interchange over a two-day site visit. He was able to determine based on visual observation locations where the distance between the existing travel lane and adjacent structures was sufficient to accommodate the necessary widening, taking into account overcrossings, off-ramps, required frontage access, and other constraints. Where necessary, he suggested refinements in the roadway alignment that would avoid takings in constrained areas. Where taking of a private building would be necessary or advisable, either due to direct displacement or indirect interference (e.g., proximity to soundwall; noise), he identified the specific buildings that would (or may) be displaced.

The results of the study shatter the validity of TCA's assertion that a non-Corridor alternative is infeasible and cost-prohibitive due to displacement impacts. Whereas TCA identifies 280 buildings that would purportedly need to be taken in San Clemente, KCA Engineering's analysis shows that the actual number is between 23 and 27—a reduction by more than a factor of ten. Of these, only 9 are single-family homes, compared with 125 single family homes identified as requiring displacement by TCA—a fourteen-fold reduction.

These results not only discredit the conclusions of the relocation study with respect to San Clemente impacts, but call into question all of that study's numbers; indeed, given the constraints are far more severe in San Clemente compared to the segments to the north, TCA's displacement estimates in those segments are likely to be inflated by an even greater factor. Indeed, based on the San Clemente segment alone, and using TCA's own parcel address data in Appendix B of the relocation study, it is apparent that TCA's assumptions as to which parcels would be displaced is as a general matter drastically off the mark (to take just one example, the assumption that 48 townhomes along Villa Encanta would be taken despite ample undeveloped open space between the backs of the homes and I-5, as well as on the opposite side of I-5; see KCA Report, Vol. 1 tab 5 [segment 6A].)

In any event, based on the KCA study alone, the EIR's claim that the AIP alternative is infeasible based on displacement and related financial grounds is not just unsupported, but is affirmatively wrong. This renders the EIR invalid. The EIR should be revised and re-circulated to include a full analysis of the AIP alternative.

Moreover, the key decision before TCA—whether to reject an environmentally superior alternative—cannot be made absent complete credible information on the financial feasibility of the AIP and other I-5-based alternatives. Any findings that such alternatives are infeasible would be invalid under CEQA based on the information in the record.

2. There Is No Basis for Concluding that Non-Toll Road Alternatives Lack Funding.

Non-Corridor alternatives such as I-5 improvements were also rejected as infeasible in the draft findings for lack of a funding source. (Findings, Facts in Support of Findings and Statement of Overriding Consideration s Regarding the Subsequent Environmental Impact Report for the SOCTIIP [hereafter "Findings"] at 231.) Again, TCA is simply wrong. TCA erroneously assumes that a toll-based funding structure similar to that for the toll-road alternatives would not be available for added lanes along the I-5. The law says otherwise. The LU-ISTEA, passed by Congress and signed by President Bush last year, specifically provides for the construction of additional lanes on interstate highways for congestion reduction that is funded by debt financing serviced by tolls. (See http://ops.fhwa.dot.gov/safetea/tollingfactsheet.htm.) The TCA's draft finding to the contrary is baseless. The very same funding scheme the TCA proposes for the Preferred Alternative is available for improvements to the I-5.[1]

In short, the findings for rejecting environmentally superior alternatives such as the AIP as infeasible are unsupportable. There is no basis under CEQA for rejecting the AIP or similar alternatives.

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[1] What *is* in doubt is whether there is funding available to finance the *Preferred* Alternative. Not only is the Project now expected to cost close to a billion dollars, but TCA has recently obligated itself to pay $120 million to the failing San Joaquin Toll Road Agency, seriously compromising its ability to obtain financing for the proposed toll road. Any finding that the preferred alternative is feasible is thus questionable at best.

II. TCA's Failure to Incorporate Induced Demand In Its Traffic Modeling Underestimates Future Traffic by an Amount that is an Order of Magnitude Greater than the Purported Benefits of the Project.

The justification for the Preferred Alternative is its purported traffic benefits. However, as the Smart Mobility Report shows with TCA's own data, the AIP alternative outperforms all the Corridor alternatives, including the Preferred Alternative, on virtually all metrics, including reducing congestion on the I-5 and reducing congestion on arterials. (N. Marshall, A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project (July 2005), at 7-9 [Vol. 1, Tab 7] [hereafter "Smart Mobility Report"].) Comparing the alternatives' performance using reductions in total vehicle hours of travel in the County as a metric, using TCA's own data, the Preferred Alternative outperforms the AIP alternative by a mere *three one-hundredths* of a percentage point. (Id. at 9.)

But even the purported traffic benefits of the preferred alternative as compared to the no action alternative are dwarfed by shortcomings in the traffic forecasts that result from TCA's failure to employ best practices. TCA used a demonstrably inferior "static" modeling approach that dramatically overstates the traffic benefits of the Project. (See generally C. Rodier, Review of Response to Traffic Comments for the South Orange County Transportation Infrastructure Improvement Project EIS/SEIR (Jan. 2006) [Vol.1, Tab 1].) The static approach fails to account for "induced demand" – that is, increases in traffic volumes or changes in traffic patterns that result when drivers respond to new roads or greater highway capacity. Induced demand – a universally recognized concept among experts – reduces the traffic benefits of any new capacity by changing travel patterns and increasing ridership, causing new congestion. To account for induced demand, a traffic model must incorporate "speed recycling" (or "feedback loops"). Failure to do so will generally result in a consistent underestimation of vehicle miles traveled (VMT) for alternatives involving new capacity.

TCA consciously choose to ignore the effects of induced travel from its proposed new transportation facilities by failing to incorporate speed recycling, against the advice of its own experts. This has resulted in underestimates of VMT and overestimates of reductions in Vehicles Hours Traveled (VHT) that are far greater – more than five times – the apparent benefit of the Project. (See Rodier, Vol. 1, Tab 1, at 4; Smart Mobility Report at 10.)

This discrepancy is amply demonstrated by the limited speed recycling that TCA did perform for the ostensible purpose of showing that a full speed recycling analysis was unnecessary. TCA asserts that, based on this limited "sensitivity" analysis, the modeling results with and without speed recycling would be about 1%, a difference TCA concludes is "insignificant." However, even assuming arguendo the validity of TCA's sensitivity analysis – which is highly suspect in light of the literature on induced demand (Rodier, Vol. 1, Tab 1, at 1) – TCA cannot claim that its numbers are insignificant. As Dr. Caroline Rodier notes in her review of TCA's modeling of the traffic impacts of the Preferred Alternative, "the 'insignificant' difference between VMT forecasts with and without speed recycling is 17 to 33 larger than the difference in VMT forecasts for the build and no-build alternatives." (Id. at 4.) Similarly, "the 'insignificant' difference between VHT forecasts (or travel time) with and without speed recycling is four to 11 times larger than the difference in VHT forecasts for the build and no-build alternatives, purported to be significant enough to justify the project." (Id.)

In other words, the very difference in projected traffic that TCA is claiming is significant for purposes of comparing the benefits of preferred alternative is an *order of magnitude* lower than the difference caused by the exclusion of induced demand from the model.

Where, as here, purported measurable project benefits are many times smaller than the effects of conceded modeling bias, the TCA cannot rationally find that these benefits actually exist. And because accurate VMT and VHT measurements are essential to measure air quality impacts, the TCA cannot rationally make findings on this record concerning the air quality impacts of the Project, either compared to the AIP alternative or the no project scenario, as discussed further in the following section.

III. Air Quality Impacts

A. TCA's Failure to Account for Induced Demand Renders the Air Quality Analysis Arbitrary.

As discussed above, the report of Caroline Rodier (Vol. 1, Tab 1), our comment letter on the DEIS/SEIR, and memoranda prepared by TCA's own independent traffic consultant, all make clear that best practices in the engineering profession dictate that a traffic model must be able to account for induced demand. As we made clear in our prior comment letter, the TCA's failure to employ these best practices thus seriously undermines the FEIR's conclusions regarding not only traffic, but also air quality (which

are based almost entirely on the traffic model).[2] TCA responds simply by stating that it was proper for the traffic study to omit feedback loops, and that therefore air quality analysis, which depended on the traffic study, was also proper. (RTC O21-322, at 3-381.) This argument fails for several reasons.

TCA claims that a '"sensitivity analysis'" conducted by the FEIR consultant (described in RTC Common Response Traffic-1) shows that application of feedback loops was not necessary for purposes of analyzing the traffic impacts of the Project. As discussed above and in Dr. Rodier's report, the sensitivity analysis does *not* show that the effects of induced demand – even on the countywide level – are insignificant. (See Rodier, Vol. 1, Tab 1.)

But the FEIR's reliance on the sensitivity analysis is even more flawed in the air quality context. The sensitivity analysis itself demonstrates that application of feedback loops was crucial to any adequate estimate of traffic on arterial roadways. The conclusion of the sensitivity analysis that application of feedback loops would have made only a 1% difference in estimation of total VMT, vehicle hours traveled (VHT), and

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[2] Quite apart from any problems with induced demand, the traffic models suffered from an intrinsic bias. Documents generated by TCA's own traffic consultant and independent expert confirmed that both the OCTAM3.1 and SCSAM traffic models consistently underestimated traffic volumes. See Memorandum from John P. Long, DKS Associates, to Louise Smart, '"Travel Model Confidence'" (Sept. 30, 2003) [Vol. 2, Ex. 1] at 2-3; Memorandum from John P. Long, DKS Associates, to Louise Smart, '"Peer Review of SOCTIIP Traffic and Circulation Analysis'" [Vol. 2, Ex. 2] (Dec. 30, 2002) at 4. In fact, the traffic model understated daily traffic volumes on freeways and tollways by 5.6%, on arterials by 6.3%, and on collectors by 16.6%. (Vol. 2, Ex. 1 at 3 [Table 1].) The model underestimated volumes during the AM peak hour by 3.2% on freeways/tollways and 7.7% on arterials, and during the PM peak hour by .3% on freeways/tollways and 3% on arterials. (Id.) Daily volumes crossing a series of '"screenlines'" drawn across major arterials and freeway sections were underpredicted by as much as 10%. (Id.) The FEIR relies on these admittedly low figures in calculating emissions and comparing them to quantitative thresholds. (RTC O21-322 at 3-381 ['"The traffic study was used as the basis of the project air quality analysis . . . .'"]; FEIR at 4.7-14.) The FEIR and supporting documents contain insufficient information to determine whether these model results were properly corrected for purposes of obtaining an accurate forecast of air quality impacts.

average daily traffic volumes (ADT) (RTC at 2-45) is derived from a countywide "weighted average based on the amount of vehicle miles and vehicle hours of travel on the various components of the circulation system (freeways, divided arterials, and undivided arterials)." (RTC at 2-55, Table 2 fn. 1.) The figures cited in these tables show that feedback loops make much more of a difference when applied to traffic on arterials than they do in the context of freeways and tollways.[3] These differences are critical to an adequate air quality analysis, in which localized congestion is highly significant.

TCA's sensitivity analysis shows that speed recycling results in substantially higher volumes on both divided and undivided arterials. The following table shows estimated VMT and VHT for the AM peak hour in 2025, assuming buildout of planned arterial improvements and the southern extension of the toll road:

AM Peak Hour	**Divided Arterial**	**Undivided Arterial**
VMT Initial (no speed recycling)	7,842,240	881,946
VMT Fifth Iteration of speed recycling	8,143,256	934,166
VMT Difference	***3.8%***	***5.9%***
VHT Initial (no speed recycling)	258,067	28,466
VHT Fifth Iteration of speed recycling	265,975	30,143
VHT Difference	***3.1%***	***5.9%***

Derived from Response to Comments, Common Response Traffic-1, Table 3, at RTC-2-56 to 2-58.

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[3] On an initial run without speed recycling, differences between the OCTAM model's input and output speeds for undivided arterial roads ranged from 11.3% to 12.7%. Under OCTA's '"convergence criteria'" for estimating model accuracy, feedback loops generally are required when this initial difference exceeds 5%. These figures show that the model's estimates of volumes on undivided arterials without speed recycling—the very estimates on which the air quality analysis depends—are highly inaccurate.

This table—derived from TCA's own numbers—further demonstrates that failure to incorporate feedback loops leads to a consistent underestimation of volumes on arterial roadways.

This failure undermines the FEIR's conclusions regarding PM10 hotspots and re-entrained PM10 emissions. Underestimation of volumes on arterial roadways necessarily leads to understated PM10 hotspot emissions at arterial intersections. Similarly, the FEIR's discussion of re-entrained PM10 emissions (i.e., roadway dust stirred up into the atmosphere by traffic) is flawed. TCA did not conduct any analysis of re-entrained PM10 in the DEIS/SEIR. Its cursory attempt to address this issue in the FEIR is undermined by flaws in the traffic model. See RTC F5-21, at 3-41. Emissions factors for re-entrained PM10 are significantly higher on arterial roadways. Id. Because total VMT on arterial roadways is substantially understated in the FEIR's traffic model, the calculations in RTC Attachment 2 regarding re-entrained PM10 are inaccurate.

TCA's adamant refusal to employ best practices in its traffic analysis fatally undermines its conclusions as to the air quality impacts of the various alternatives. TCA's own sensitivity analysis, flawed as it is, demonstrates that feedback loops were necessary to any accurate determination of future traffic volumes and air quality impacts on arterial roadways. The FEIR's conclusions with respect to these impacts are not supported by substantial evidence in the record.

B. The FEIR Fails to Analyze Impacts of PM2.5.

Our August 4, 2005 letter pointed out that the DEIS/SEIR had completely failed to analyze potentially significant impacts of fine particulate emissions or PM2.5. In its response to these comments, TCA asserts that it would not be possible or useful to estimate PM2.5 emissions from the Project. This assertion is both inaccurate and insufficient for purposes of CEQA and NEPA.

An increase in PM2.5 emissions would represent a significant adverse environmental impact of the Project. The serious health risks associated with PM2.5 exposure are well-documented. In its final rule designating attainment and non-attainment of PM2.5 standards, the EPA noted the significant relationship between PM2.5 levels and "premature mortality, aggravation of respiratory and cardiovascular disease . . . , lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia," particularly among "older adults, people with heart and lung disease, and children." (See generally Air Quality

Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards, 70 Fed. Reg. 944, 945 (Jan. 5, 2005) [Vol. 2, Ex. 28-e].)

In a final staff paper supporting further tightening of PM2.5 standards, EPA scientists confirmed that

> the body of evidence supports an inference of causality for associations between PM2.5 and a broad range of health effects. Short-term exposure to PM2.5 is likely causally associated with mortality from cardiopulmonary diseases, hospitalization and emergency department visits for cardiopulmonary diseases, increased respiratory symptoms, decreased lung function, and physiological changes or biomarkers for cardiac changes. Long-term exposure to PM2.5 is likely causally associated with mortality from cardiopulmonary diseases and lung cancer, and effects on the respiratory system such as decreased lung function or the development of chronic respiratory disease.

(U.S. EPA, Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information, OAQPS Staff Paper, EPA-452/R-05-005a (December 2005) at 3-57 to 3-58 [hereafter "Staff Paper"] [Vol. 2, Ex. 28-a].) Again it was found that people with existing heart and lung diseases, children, older people, and people living in proximity to roadways were especially susceptible to these effects. (Id. at 3-35 to 3-36.) Increased PM2.5 emissions thus clearly would represent the type of substantial or potentially substantial change in the physical environment that requires CEQA analysis. (See CEQA Guidelines § 15382, App.G.III.)

The FEIR's total failure to account for PM2.5 is especially egregious in light of the well-publicized regulatory process surrounding the pollutant over the past few years. EPA first proposed regulating PM2.5 as a criterial pollutant in 1996 (see National Ambient Air Quality Standards for Particulate Matter: Proposed Decision, 61 Fed. Reg. 65,638 (Dec. 13, 1996) [Vol. 2, Ex. 28-f]), and finalized this rule in 1997. (National Ambient Air Quality Standards for Particulate Matter, 62 Fed. Reg. 38,652 (July 18, 1997) [Vol. 2, Ex. 28-g]). The California Air Resources Board has adopted even more restrictive annual PM2.5 standards. (17 Cal. Code Regs. § 70200 [establishing 12 µg/m3 as annual arithmetic mean limit]; see also Cal. Air Res. Bd., Ambient Air Quality Standards (Nov. 29, 2005), available at http://www.arb.ca.gov/aqs/aaqs2.pdf (last visited January 6, 2006) [Vol. 2, Ex. 8].) The 2003 Air Quality Management Plan for the South Coast explicitly anticipated the new state and federal PM2.5 requirements. (AQMP (2003) at 10-7 to 10-11 [Vol. 2, Ex. 6].) Orange County was designated as a non-

attainment area for the federal PM2.5 standard more than a year ago. (40 C.F.R. § 81.305; Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards, 70 Fed. Reg. 944, 956 (Jan. 5, 2005) [Vol. 2, Ex. 28-e].)

EPA recently announced its intent to propose a new rule further restricting PM2.5 emissions. (See U.S. EPA, Fact Sheet: Proposal to Revise the National Ambient Air Quality Standards for Particulate Matter (Dec. 20, 2005), available at http://www.epa.gov/air/particles/pdfs/fs20051220pm.pdf [Vol. 2, Ex. 12].) EPA also released modeling data showing that Orange County is expected to remain in non-attainment of both existing and revised PM2.5 standards in both 2010 and 2015. (U.S. EPA, Office of Air Quality Planning & Standards, Modeled Estimates for the Year 2010 (Dec. 20, 2005), available at http://www.epa.gov/air/particles/pdfs/presentation20051220b.pdf [Vol. 2, Ex. 10]; U.S. EPA, Office of Air Quality Planning & Standards, Modeled Estimates for the Year 2015 (Dec. 20, 2005), available at http://www.epa.gov/air/particles/pdfs/presentation20051220c.pdf [Vol. 2, Ex. 11].)

EPA also adopted a final rule requiring analysis of PM2.5 precursors (including NOx, SOx, and VOC) in transportation conformity determinations more than six months ago. (40 C.F.R. §§ 93.102, 93.119; Transportation Conformity Rule Amendments for the New PM2.5 National Ambient Air Quality Standard: PM2.5 Precursors, 70 Fed. Reg. 24,280 (May 6, 2005) [Vol. 2, Ex. 28-h].) The Response to Comments in the FEIR either ignores these determinations or inaccurately suggests that many of them have not yet been made, when in fact they were final at the time the FEIR was released. See RTC O21-351 at 3-395. Moreover, a great deal of information about PM2.5, including monitoring data from a station located in Mission Viejo, was available at the time the FEIR was being prepared. (See Cal. Air Res. Bd., Characterization of Ambient PM10 and PM2.5 in California Technical Report (June 2005), available at http://www.arb.ca.gov/pm/pmmeasures/pmch05/pmch05.htm (last visited January 5, 2006), at II-O-3, II-O-4 [Vol. 2, Ex. 7].) The FEIR omitted any discussion of this information, either in terms of existing environmental conditions or potentially significant impacts as compared to those conditions. Ignorance of applicable and available regulatory and scientific information, whether willful or not, cannot excuse failure to analyze significant environmental impacts.

The FEIR's suggestion that PM2.5 is primarily a regional rather than a site-specific pollutant is both incorrect and immaterial. It is true that fine particle

concentrations tend to be more uniform than coarse particle concentrations, but PM2.5 may be significantly higher (as much as 8 $\mu g/m^3$) in specific locations, particularly near roadways. (See Staff Paper at 2-69 to 2-70.) Failure to analyze localized impacts may thus prevent discovery of increased concentrations; these impacts are more likely to affect socioeconomically vulnerable populations that tend to live closer to roadways. (Id. at 5-40 to 5-42.) Site-specific analysis is therefore essential to a proper discussion of PM2.5 impacts.

But in any event, the fact that a project contributes pollutants that have regional effects does not alleviate the need to analyze the impacts of that contribution. To the contrary, where as here a region is in non-attainment for a pollutant, any incremental increase in that pollutant is a potentially significant impact. (Indeed, under federal law, a conformity determination now requires a regional emissions analysis for PM 2.5 and its precursors. See 40 C.F.R. § 93.119.) TCA cannot ignore this impact on the basis of its regional effects.

The FEIR also erroneously claims that analysis of project-specific PM2.5 impacts is unwarranted because no final guidance on modeling such impacts exists. Our previous comments cited a widely available draft guidance document prepared by EPA staff. (See Draft Guidance for Demonstrating Attainment of Air Quality Goals for PM2.5 and Regional Haze, available at http://www.epa.gov/scram001/guidance/guide/draft_pm.pdf [Vol. 2, Ex. 28-d].) Contrary to assertions in the response to our comments, this Guidance provides quite specific advice on modeling impacts in "hotspots" where ambient concentrations of primary PM2.5 are expected to be high. (See id. at 50-51, 82-86 [excerpted at Vol. 2, Ex. 4]. In Southern California, particulate matter from mobile source hydrocarbon combustion (e.g., automobiles) is a substantial primary component of PM2.5. (See, e.g., Staff Paper at 2-11, Table 2.2 [excerpted at Vol. 2, Ex. 3]; U.S. EPA, Office of Air Quality Planning & Standards, PM-2.5 Composition and Sources (June 16, 1997), available at http://www.epa.gov/ttn/oarpg/naaqsfin/pie_txt.pdf. [Vol. 2, Ex. 9].) The existence of some degree of modeling uncertainty is not an excuse for ignoring a known potential impact altogether. The FEIR should have and could have made a reasonable effort to identify and analyze the potential impacts from PM2.5. Instead, it made no effort at all.

Further compounding these errors, the FEIR asserts that PM2.5 emissions will be insignificant because PM10 emissions are expected to fall below applicable thresholds of significance. There are several problems with this conclusion. First, as discussed below, the FEIR's conclusion that the Project's PM10 emissions are

insignificant is flawed.[4] Second, "fine and coarse particles have fundamentally different sources and composition." (Staff Paper at 2-40; see also id. at 2-6 to 2-8 [describing different sources and atmospheric formation processes], 2-9 to 2-10 [different atmospheric behavior], Table 2.2 at 2-11, 2-42 to 2-43 [discussing composition of PM2.5], 2-46 to 2-49 [noting lesser correlation in western United States, and specifically Southern California, between PM10 and PM2.5].) Third, fine particles (i.e., those comprising PM2.5) have far more serious health effects than coarse particles. (See generally id. § 3.) PM10 thus does not serve as an effective proxy for PM2.5 concentrations, health effects, or atmospheric behavior, and PM10 levels cannot provide substantial evidence to support a conclusion that PM2.5 emissions will be less than significant.

Finally, the FEIR contains no discussion of the secondary component of PM2.5 that forms as a result of atmospheric chemical reactions. NOx is a major PM2.5 precursor, and is currently required to be analyzed as such in transportation conformity determinations. (40 C.F.R. §§ 93.102, 93.119; Transportation Conformity Rule Amendments for the New PM2.5 National Ambient Air Quality Standard: PM2.5 Precursors, 70 Fed. Reg. 24,280 (May 6, 2005) [Vol. 2, Ex. 28-h].) As the FEIR makes clear, many of the SOCTIIP alternatives will result in significant increases in NOx emissions, and the Preferred Alternative is the worst. (See FEIR at 4.7-22 to 4.7-23. 4.7-34, Table 4.7-31, Fig. 4.7-4.) Yet the FEIR does not even acknowledge the substantial role that NOx plays in atmospheric formation of PM2.5, nor does it propose any mitigation for the direct NOx impacts, despite acknowledging that these impacts will be significant. (See FEIR at 7.8-158, Table 7.8-2.) These omissions clearly violate CEQA.

The FEIR lacks even a cursory analysis of the potentially devastating health impacts of PM2.5. This renders the document inadequate under CEQA.

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[4] Even assuming for the sake of argument that PM10 levels may be used to estimate PM2.5 concentrations, the FEIR would have to conclude that PM2.5 impacts would be highly significant. The FEIR acknowledges that PM10 emissions from all Project alternatives will greatly exceed SCAQMD significance thresholds as compared to existing conditions. (FEIR Tables 4.7-24, 4.7-27, 4.7-30, 4.7-34, 4.7-37. 4.7-39 [showing increases almost 65 times higher than applicable significance threshold of 150 lbs/day].) It would necessarily follow that PM2.5 emissions will be equally high, and equally significant for CEQA purposes.

C. The FEIR Fails to Account for the Significance of Future PM10 Impacts in Comparison to Existing Conditions.

In our August 4, 2005 letter, we pointed out that TCA had used improper methodology in estimating PM10 impacts. But the FEIR's own flawed methodology still demonstrates increases in PM10, compared to both existing conditions and the No Action alternative, as a result of nearly all Project alternatives (with the Preferred Alternative being one of the worst). (Compare FEIR at 4.7-66, Table 4.7-39, with id. at 4.7-79, Fig. 4.7-4; see also FEIR at 4.7-34.) Contrary to the FEIR's conclusions, these impacts are significant under CEQA.

The FEIR makes clear that the No Action alternative will exceed South Coast Air Quality Management District (SCAQMD) thresholds for PM10. (FEIR at 4.7-66, Table 4.7-39.) The Preferred Alternative will result in an additional increase in PM10 above the No Action alternative. (FEIR at 4.7-62, Table 4.7-31.) Yet the FEIR's summary of CEQA impacts inexplicably (and contradictorily) claims that PM10 will not exceed SCAQMD thresholds, and concludes that impacts are not significant. (FEIR at 7.8-158, Table 7.8-2 ["PM10 and fugitive dust will not exceed SCAQMD threshold during operation."].) SCAQMD's threshold of significance for PM10 is 150 lbs/day. The No Action alternative will contribute nearly 10,000 lbs/day of PM10, and the Preferred Alternative, according to TCA, adds an additional 6 lbs/day. The FEIR concludes that this is not significant because the difference between the Preferred and No Action alternatives is less than 150 lbs/day. This conclusion is unlawful under CEQA.

CEQA requires comparison to a baseline derived from environmental conditions existing at the time the Notice of Preparation for the document was issued. (CEQA Guidelines §§ 15125(a), 15126.2(a).) The purpose of a "no project" alternative under CEQA is not to provide a baseline for analysis of significant impacts, but instead to provide a point of comparison for decisionmakers. (CEQA Guidelines § 15126.6(e)(1) ['"The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis . . . ."].) The FEIR, by evaluating the impacts of proposed build alternatives in comparison to a future scenario projected from existing transportation and land use plans, commits an error that California courts have repeatedly recognized and held unlawful. (See, e.g., Envtl. Planning and Info. Council v. County of El Dorado, 131 Cal. App. 3d 350, 358 (1982) ("EPIC"); Christward Ministry v. Superior Court, 184 Cal.App.3d 180, 186-87 (1986).) As the EPIC court explained, comparing the project with an existing plan "can only mislead the public as to the reality of the impacts

and subvert full consideration of the actual environmental impacts which would result." EPIC, 131 Cal. App. 3d at 358. These cases and the plain language of the CEQA Guidelines make clear that existing physical conditions, not the "no project" alternative or some projection from existing planning documents, constitute the baseline against which the significance of environmental impacts must be measured.

When properly compared to existing conditions, all of the alternatives cause significant PM10 impacts far in excess of the SCAQMD threshold. (FEIR Tables 4.7-24, 4.7-27, 4.7-30, 4.7-34, 4.7-37. 4.7-39 [showing increases almost 65 times higher than applicable significance threshold of 150 lbs/day].) Yet the FEIR concludes that operational PM10 impacts are not significant for any alternative, and consequently proposes no mitigation for non-construction impacts. (See FEIR Table 7.8-2.) This conclusion, which completely ignores CEQA's directive to evaluate the significance of environmental impacts in light of existing conditions, is contrary to law.

D. The FEIR Fails to Address Toxic Air Contaminants

Comments submitted by this firm and by the EPA raised concerns about the DEIS/SEIR's failure to analyze mobile source air toxics other than diesel particulate matter. The response to these comments states in a conclusory fashion that such analysis, had it been done, would not have changed the document's conclusions. (See, e.g., RTC F5-32, at 3-48.) This type of conclusory statement is not substantial evidence supporting a determination that air toxics present a less than significant environmental impacts. Moreover, the sections of the Air Quality Technical Report cited in the response for "more background on toxic air contaminants" contain only one sentence on toxins other than diesel particulate matter, even though these toxins (including formaldehyde, butadiene, benzene, and other pollutants) comprise nearly a third of the overall cancer risk from air toxics. (See id.; see also Air Quality Technical Report at 5-52.) The analysis of this risk has not been done, and TCA's response to comments concerning this omission is best described as non-responsive. Once again, the document must be revised and recirculated with a proper analysis of impacts from air toxics.

E. The FEIR Fails to Analyze Cumulative Air Quality Impacts.

The FEIR's discussion of cumulative air quality impacts, aside from being cursory and conclusory, is legally flawed in several respects. The discussion does not even mention PM10, despite clear evidence from elsewhere in the document that Orange County is in serious non-attainment status for the pollutant and that PM10 emissions from

the various SOCTIIP alternatives are expected to increase dramatically as compared to existing conditions. In light of the degraded condition of air quality in the basin, these additional contributions are cumulatively considerable, and should have been analyzed as such. (See CEQA Guidelines §§ 15065(a)(3), 15130; see also Kings County Farm Bureau v. City of Hanford, 221 Cal. App. 3d 692 (1990).)

The analysis also fails to explicitly take into account the construction-related impacts of the various residential development and other land use projects discussed throughout the cumulative impacts section. All of these projects have the potential to generate significant air pollution, including PM10 from fugitive dust, diesel particulate matter, and other pollutants. Because the cumulative impacts section relies in some places on projected future conditions,[5] and in other places on lists of specific projects, its conclusions are inconsistent to the extent that particular impacts of specific projects are not assumed in projections of future conditions. Construction-related cumulative impacts from land use changes and development should have been analyzed in the air quality section.

Another problem is the failure to discuss PM2.5. As discussed above in the context of direct impacts, this omission deprives decisionmakers and the public of essential information concerning the Project's contribution to the serious human health effects of this pollutant.

Air quality impacts from a major highway project, especially one designed to carry traffic from extensive residential and commercial development, are almost categorically cumulatively considerable. The FEIR's failure to devote more than a few conclusory sentences to these impacts, and its failure to discuss some pollutants at all, renders the document inadequate to support a decision. The FEIR must be revised and recirculated.

IV. Biological Impacts and Mitigation

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[5] It is not clear that the plans relied on for these projections, namely the OCP-2000 projections and the MPAH, adequately "described or evaluated regional or area wide conditions contributing to the cumulative impact," such as to justify reliance on these plans in a cumulative impacts analysis. (CEQA Guidelines § 15130(b)(1)(B).)

A. The Mitigation Strategies Proposed in the FEIR are Legally Flawed and Biologically Inadequate

1. Proposed Mitigation Measures are Undefined and Insufficient to Mitigate Impacts to Habitat and Wildlife

The FEIR acknowledges that the Preferred Alternative will directly impact more than one thousand acres of various plant communities, including sensitive coastal sage scrub, riparian, grassland, woodland, and wetland habitats. See FEIR at 4.11-96, Table 4.11-4A. Despite the enormous scope of this impact, the FEIR relies on undefined, non-specific measures as '"mitigation,'" without providing any evidence of the efficacy of those measures.

One of the primary mitigation strategies for biological impacts is TCA's commitment to preserve or restore habitat elsewhere to make up for habitat lost or degraded by the Project. (See FEIR at 4.11-43 to 4.11-46, 4.11-53 to 4.11-55.) But for the most part, the document fails to identify where where this habitat will come from. There is no evidence that there is sufficient suitable habitat available for acquisition, preservation or restoration so as to compensate for the specific habitat types to impacted by the Project. Unless such habitat is identified, it is impossible to know the extent to which this mitigation strategy is capable of offsetting the impacts of the Project.

The only mitigation specifically identified in the FEIR is the 327 "credits" in TCA's existing mitigation bank at Chiquita Canyon. These credits originally were intended to mitigate for loss of coastal sage scrub and corresponding impacts to sage scrub-dependent species. (See U.S. Fish & Wildlife Service, Cal. Dep't of Fish & Game, and Foothill/Eastern Transportation Corridor Agency, Chiquita Canyon Conservation Bank Agreement §§ 2.6, 2.7, 4.2 (May 24, 1996) [Vol. 2, Ex. 17].) The Preferred Alternative will impact more than 400 acres of coastal sage scrub and associated ecotones. (FEIR at 4.11-96, Table 4.11-4A.) Even at the FEIR's insufficient 1:1 mitigation ratio (see below), the specific area identified in the document as mitigation is not large enough to account for the Project's impacts on sage scrub communities. The FEIR merely asserts, without support, that additional coastal sage scrub will be either restored or preserved. (FEIR at 4.11-43 to 4.11-44 [Measure WV-11].) There is no evidence that additional land suitable for restoration to coastal sage scrub exists on the Chiquita Canyon property, nor is there any evidence that other suitable sage scrub acreage is available for preservation. There is no way for the public to evaluate the sufficiency or effectiveness of the proposed mitigation.

It also appears that TCA intends to use the Chiquita Canyon area as mitigation for impacts to a wide range of other impacted vegetation communities and dependent species, at least to the extent that these communities can be "restored" or "created" there. Again, there is no evidence in the FEIR that suitable restoration areas are available, either on this site (which appears to be over-committed as mitigation for this project) or elsewhere. Indeed, before TCA even can apply for such additional credits, it must prepare a "restoration plan" for approval by USFWS and CDFG, identifying the specific area to be restored, the method of restoration, a statement of habitat value, success criteria, and a "set number" of additional conservation credits. (Conservation Bank Agreement at § 8(b).) But none of this information is in the FEIR. Consequently, the FEIR's conclusions that habitat impacts can be mitigated to a level of insignificance are without evidentiary support. (See FEIR at 7.11-165 to 7.11-166 (finding impacts to wetland, riparian, and woodland communities less than significant after mitigation).) Nor is there evidence to support the FEIR's finding that other habitats with significant and unavoidable impacts (such as sage scrub) have been mitigated to the extent feasible as required by CEQA. (See Pub. Res. Code § 21002.1(b).)

Similarly, there is no evidence in the FEIR supporting a conclusion that these mitigation measures will be effective in reducing impacts on the wide variety of plant and animal species that will be impacted within the various vegetation communities. As the attached report from Wayne Spencer explains, both the DEIS/SEIR and the FEIR analyze habitat values only in terms of vegetation communities, and thus fail to account for species-specific impacts. See W. Spencer, Comments Concerning the Final EIS/SEIR for the SOCTIIP with Emphasis on Inadequate Reponses to Previous Comments Concerning Biological Impacts and Mitigation (January 9, 2006) [Vol. 1, Tab 2].)

Even if the EIR had identified specific mitigation habitat with clear biological value, the proposed mitigation ratio of 1:1 is not scientifically accepted as adequate compensation for habitat impacts. In its comments on the DEIS/SEIR, the California Department of Fish & Game made clear that the 1:1 mitigation ratio for various vegetation types was insufficient to mitigate for the effects of the Project. (RTC S6-17, at 3-113.) The response to comments states that this ratio is merely a guideline, to be refined with further agency input, but nonetheless insists in conclusory fashion that it is "sufficient." This statement is not only unsupported by science, but it is contradicted by TCA's conclusions that the impacts to at least some habitat and species will remain significant after mitigation. Public agencies like TCA are required to mitigate significant environmental impacts "whenever it is feasible to do so." (Pub. Res. Code § 21002.1(b).) If it is feasible to further reduce the significant impacts of this Project by using a higher

mitigation ratio, TCA must do so. It may not merely conclude, without any analysis or evidence, that its lower ratio is "sufficient."

2. Replacement of Already-Preserved Land is not "Mitigation"

A substantial portion of the habitat impacted by the Preferred Alternative is not only biologically important, but is *already preserved*, particularly within the Donna O'Neill Conservancy and San Onofre Beach State Park. Nevertheless, the EIR proposes to mitigate the loss of these lands in the same manner as it would for unpreserved land, creating "mitigation" that is entirely illusory.

Land that is already preserved cannot be mitigated by merely replacing the same acreage elsewhere. This type of "mitigation" necessarily and logically results in the same net loss of habitat that would occur without any mitigation at all. The Project is built and habitat is lost, yet the net amount of preserved land does not increase at all. In effect, the EIR is claiming mitigation credit for land that is already preserved (albeit in a location that may be slightly different). For this reason, where already-preserved land will be lost, replacement with equivalent habitat is only the first step; at least as much additional habitat must then be preserved to attain the net gain in preserved lands needed to claim mitigation.

The problem is highlighted by the fact that the Donna O'Neill Conservancy was itself created for the very purpose of providing mitigation for *another* project's significant impacts (those of the nearby Talega development). TCA's Preferred Alternative will obliterate the western, upland portion of the Conservancy – effectively eliminating a portion of the mitigation for the Talega project. The FEIR fails to appreciate this, claiming simply that habitat on the Conservancy is of no greater value than any other similar habitat, and thus may be mitigated at the same 1:1 ratio. Whatever the physical characteristics of this property, it has one important distinguishing feature: it *is already protected*. Indeed, this is the very feature that the EIR relies on when it tries to claim mitigation credit for preserving habitat that already exists – preservation adds value. Merely reconfiguring the Conservancy to preserve its total acreage, and then claiming the reconfigured portion as "mitigation," is tantamount to double-counting: using the same

preserved land as mitigation for two different projects. The purported mitigation is illusory, contrary to the requirements of CEQA.[6]

The EIR further compounds this problem by proposing to use as mitigation itself habitat that is *already preserved*. (See, e.g., FEIR at 4.11-45, 4.11-53, 4.11-54 [stating that preservation, creation, and restoration of various vegetation communities will take place only in "dedicated open space areas"].) To the extent this involves preserving land that is already dedicated to open space, the measure obviously will have no practical mitigation effect. The FEIR must at a minimum identify and preserve *unprotected* natural habitat (in mitigation ratios sufficient to compensate adequately for habitat losses caused by the Project), or else demonstrate why it is infeasible to do so. The FEIR has done neither.

The FEIR's approach to the Chiquita Canyon conservation bank also is troubling in this regard. The FEIR proposes to mitigate impacts to native grasslands partly by "preservation" of this vegetation community in the Chiquita Canyon conservation bank. FEIR at 4.11-44. The Conservation Bank Agreement, however, does not contemplate granting additional credit for further "preservation" of native grasslands or other vegetation types. (See Conservation Bank Agreement, §§ 4.1, 8 [discussing potential additional credit for habitat *restoration*, following a specific proposal and agency approval].) To the extent that such native grassland exists in Chiquita Canyon, it is presumably already "preserved" and claimed as mitigation for another project.

By simply replacing in kind habitat that is already preserved (and by further limiting the replacement land to areas that are already dedicated as open space) the EIR is offering mitigation for critical biological impacts that is largely illusory, in contravention of CEQA.

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[6] The EIR's reliance on restoration of vegetation communities within Chiquita Canyon may also raise a problem of double counting. A significant portion of Chiquita Canyon's 1,182 acres were set aside as mitigation for the impacts of the Oso Segment of the Foothill/North toll road, leaving a surplus of only 327 acres. (Conservation Bank Agreement at § 2.7.) Yet TCA proposes to obtain credit for a greater (though as yet unspecified) number of acres for its contribution to this land. Absent clear evidence to show that the habitat is degraded and can effectively be restored through (and only through) active restoration efforts, any additional mitigation credit for this land would effectively be using the same land twice as mitigation.

3. The FEIR Improperly Defers Mitigation.

CEQA mandates that mitigation measures be identified and analyzed in the FEIR, not at some later date. (See Sundstrom v. County of Mendocino, 202 Cal. App. 3d 296, 306-07 (1988) [holding that a negative declaration was invalid when county approved a project while postponing the resolution of uncertainties regarding environmental impacts to a later date].) "The purpose of an environmental impact report is . . . to list ways in which the significant effects of such a project might be minimized . . . ." (Pub. Res. Code § 21061.) Decisionmakers and the public cannot know if the impacts of the various alternatives are significant until specific mitigation measures are proposed. Postponing the imposition of mitigation measures until after project approval would undermine the purpose of CEQA and is not allowed by the law.

Put another way, the FEIR must set forth either specific mitigation measures or performance standards that mitigation measures would achieve by various, *specified* approaches. (See CEQA Guidelines § 15126.4; see also Sacramento Old City Ass'n v. City Council of Sacramento, 229 Cal. App. 3d 1011, 1034 (1991).) The FEIR relies heavily on a "biological resource management plan," or BRMP, for mitigation of significant project impacts. Like other mitigation measures proposed in the FEIR, the BRMP does not yet exist. Yet the FEIR fails to set forth sufficient specific, measurable performance standards for the BRMP that could justify later formulation of mitigation methods targeted to meet those standards. Indeed, "performance standards" are one of the main items left "to be discussed" at some future point in the BRMP. (FEIR at 4.11-40 [Measure WV-3], 4,12-30 [TE-3].) A performance standard that has not even been "discussed" cannot be considered sufficiently specific to support any decision under CEQA.

Furthermore, the FEIR does not provide any firm commitment to develop or implement mitigation measures. By way of example, while the Project Biologist may recommend design measures for avoidance and minimization of impacts to sensitive biological resources, TCA retains discretion to "determine the implementation of those recommendations." (FEIR at 4.12-30 [Measure TE-2].) Thus the document not only fails to identify necessary mitigation measures, but also fails to provide any commitment to implement the measures once they are recommended. This is insufficient under CEQA.

Other mitigation measures in the document, including the stormwater pollution prevention plan, the "best management practices" associated with controlling

road runoff, and even the "Project Design Features" intended to reduce water quality impacts, suffer from the same basic flaw. Either measurable performance standards or specific mitigation measures need to be provided before the FEIR can conclude that any impacts will be mitigated to the extent feasible or to a level of insignificance.

The only purported performance standards identified in the document pertain to the restoration and creation of vegetation communities in the Chiquita Canyon conservation bank. (See generally FEIR at 4.11-40 to 4.11-55.) Many of these standards are defined by comparison to "an appropriate reference site." (FEIR at 4.11-44, 4.11-45, 4.11-54, 4.11-55.) Nowhere does the FEIR identify either an applicable reference site or the characteristics that would make it an "appropriate" point of comparison. Nor is there any assurance provided that the standards can and will be met. Thus, even in the few instances where the FEIR purports to identify performance standards, those standards prove illusory.

In any event, no standards specific to particular species, or regarding the effectiveness of particular vegetation communities in sustaining those species, are set forth. The FEIR does not provide any guarantee that restoration effectiveness will be monitored for longer than five years, does not provide any firm process for permanently protecting areas created or restored, and does not spell out any measures (beyond tinkering with seeding and irrigation regimes during the initial five-year monitoring period) that will be taken if restoration efforts fail. Accordingly, the document gives decisionmakers and the public no basis on which to evaluate whether, and to what extent, restoration will lead to effective mitigation. Again, this is insufficient under CEQA, particularly in light of the difficulties attending creation and restoration of habitat sufficient to sustain dependent wildlife.

C. The FEIR Fails to Disclose and/or Mitigate Significant Environmental Impacts to Sensitive Species.

1. Pacific pocket mouse

The pacific pocket mouse is considered a critically endangered species, the highest threat rating short of extinct in the wild. As discussed in our comments on the draft EIR and in the attached reports by Wayne Spencer of the Conservation Biology Institute (Vol. 1, Tab 2), the proposed toll road alignment through San Onofre State Park will both directly and indirectly impact one of only *four* known remaining occupied sites of this species, jeopardizing the species chances of recovery and continued survival. The

EIR's own data show that the boundary of the toll road alignment will be located within *feet* of locations where the species has been trapped. Yet incredibly, despite the overwhelming evidence that impacts to this species will be significant, the FEIR continues to maintain that there will be no impacts at all. This conclusion is unsupported by substantial evidence.

Dr. Spencer – a leading expert on pacific pocket mouse – points out that the Preferred Alternative would likely to be the "last nail in the coffin" for the affected population. As detailed in Dr. Spencer's comments on the FEIR, the document continues to downplay the impacts to the mouse for reasons that are biologically unsupportable. His comments also makes clear that the primary specific mitigation strategy proposed for the pocket mouse – building an undercrossing – is completely untested for *this species*, there being no scientific support for the idea that a small mammal would be able to use it. The FEIR is non-responsive on this point. These and other comments relating to the mouse and other biological impacts are discussed in more detail in Dr. Spencer's report.

2. Steelhead trout and tidewater goby

The preferred alternative will also significantly impact federally endangered steelhead trout and tidewater goby. As discussed below and in the attached comments from Michael D. White, Ph.D. (Vol. 1, Tab 3), the water quality impacts of the Project are likely to be dramatic for these listed fish, and that the mitigation measures proposed in the FEIR cannot be considered adequate or effective. There is no basis for the EIR to conclude that these impacts will be reduced to a level of insignificance.

Resource agencies charged with conservation of endangered southern steelhead have made similar points in comments on the DEIS/SEIR. Yet the FEIR continues to ignore the direct and indirect downstream impacts associated with constructing and operating a massive highway, involving dozens of stream crossings and drainage structures, in a largely undeveloped watershed critical to the recovery of a once-abundant fishery.

Once thought extirpated, southern steelhead recently have been found in San Mateo and San Juan Creeks. Like all salmonids, steelhead need cool, clean water, clean spawning gravels, proper nutrients, unobstructed migration corridors, and deep pools in which to shelter during the summer months. (See generally K. Finney and J. Edmondson, Swimming Upstream: Restoring the Rivers and Streams of Coastal Southern California for Southern Steelhead and Other Fishes (no date) [Vol. 2, Ex. 13].) Steelhead

are especially sensitive to fine sediments and turbidity, both of which may be multiplied many times over by road construction projects. (See White, Vol. 1, Tab 3, at 1-2; see also A.P. Wheeler et al., Impacts of New Highways and Subsequent Landscape Urbanization on Stream Habitat and Biota, 13 Reviews in Fisheries Science 141, 144-45 (2005) [Vol. 2, Ex. 14].) The Preferred Alternative identified in the FEIR would result in massive watershed disturbance in the San Juan and San Mateo Creek watersheds during both construction and operation of the road. The FEIR, however, dismisses these impacts without sufficient analysis or mitigation.

The FEIR concludes that impacts from construction and operation of the toll road extension will be less than significant for steelhead because a runoff management plan, a stormwater pollution prevention plan, a biological resource management plan, associated "best management practices," and vague "project design features" will prevent any deterioration of water quality. This claim is not supported by evidence or analysis in the record.

Neither the stormwater pollution prevention plan nor the biological resource management plan yet exist. Therefore, it is impossible to determine the extent to which the measures proposed in these plans, or in the runoff management plan and associated "best management practices," will be sufficient to protect not only general water quality, but also endangered fish. Similarly, as Dr. White points out in his letter (Vol. 1, Tab 3, at 2), the "Maximum Extent Practicable" standard for water quality mitigation relied upon by the EIR is ill-defined and insufficient to support a conclusion that aquatic species will not be harmed. Indeed, in the context of water quality regulation, the MEP standard generally requires consideration of a number of competing factors, including factors such as feasibility and costs that are not based on water quality. (See, e.g., Regional Water Quality Control Board, Region 8, Order No. R8-2002-0011 (Oct. 25, 2002), at App. 4, pp. 4-6.) Nor does the environmental documentation make any attempt to show that the proposed water quality and hydrology mitigation measures are in any way linked to or sufficient to meet the specific habitat requirements of endangered and threatened fish. The FEIR does not provide any assurance that it will implement measures sufficient to fully mitigate the impacts to these extremely sensitive species.

These problems are compounded by the EIR's failure to accurately disclose the magnitude of the Project's water quality impacts. The primary basis for the EIR's conclusion is that the Project would increase the impermeable area and resulting runoff by a relatively small amount compared to the *entire San Mateo Creek watershed.* But, as discussed in a report prepared by Philip Williams and Associates for the Surfrider

Foundation, this is the wrong baseline; the road's impacts on the specific sub-watersheds it traverses will be far more dramatic, causing irreversible damage to the creek and the 20 sub-watersheds traversed by the road. (See Philip Williams & Assoc. (Jan. 6, 2006) [Vol. 1, Tab 6].) Up to 29% of certain watersheds will become impervious as a result of the Project, with the disturbance area occupying up to *100%* of some. (Id. at 2.) These sub-watershed impacts will lead to substantial erosion and water quality degradation, and are likely to render downstream creeks unrestorable. (Id.)

The vague and deferred mitigation measures proposed in the FEIR will not be able to prevent these impacts. Specifically, even a two-year storm event will likely overwhelm the system of "extended detention basins" on which so much of the FEIR's water quality and aquatic mitigation relies, leading to increases in fine sediments that will degrade instream and lagoon habitat. (Vol. 1, Tab 6, at 2, 14.)

Nor is it clear that the proposed biological resource management plan was ever intended to protect steelhead, tidewater goby, or other aquatic species. (See FEIR at 4.12-30 [omitting mention of fish among species for which monitoring will be conducted during construction].) In fact, none of the mitigation measures referenced in the FEIR as applying to steelhead and tidewater goby were specifically designed to address those species' habitat requirements. (See FEIR at 4.12-73, Table 4.12-6 [identifying Measures TE-1 through TE-5 and TE-27 through TE-29 as applicable to steelhead and tidewater goby].) There is no evidence that any of these general measures was designed for, or will be effective in protecting, either species. Indeed, the one specific mitigation measure identified as applicable to these fish requires fencing along the highway, designed to direct terrestrial wildlife to undercrossings. (Id. [referencing Measure TE-5 as mitigation for southern steelhead and tidewater goby].) Obviously, fencing along a tollway will not mitigate for impacts to fish.

The only measure clearly applicable to aquatic species addresses only direct streambed impacts and migration barriers. (FEIR at 4.12-32 [Measure TE-9].) Mitigation of downstream water quality and sedimentation impacts—widely recognized as critical to maintenance of fish habitat—is left entirely to a handful of underdeveloped and deferred water quality measures.

For example, the FEIR and runoff management plan propose to put each and every smaller stream crossed by the highway through a culvert. Culverts are known to change flow regimes, increase erosion, starve downstream areas of nutrients and habitat components (e.g., by blocking downstream passage of woody debris), and fail

during large storm events, contributing to road fill failures and debris torrents. (Wheeler, Vol. 2, Ex. 14, at 146.) Indeed, "[c]ulverts throughout a tributary network can reduce production of species that require spawning migrations," including steelhead. (Id. at 149.)

Similarly, the "best management practices" proposed for road operation, such as the extended detention basins for highway runoff, have not been evaluated specifically for their effectiveness in protecting endangered fish from runoff, peak flow changes, and toxics. Traffic residue, especially metals and other substances accumulating in roadside dust, can be dangerous to fish, especially "when large highways are drained by small streams," as is the case here. (See id. at 147.) These types of measures are rarely evaluated for effectiveness and have a substantial risk of failure. (Id. at 144 [citing Pennsylvania study showing that "even in the presence of sediment control techniques, streams impacted by highway construction carried 5 to 12 times more fine sediment than a control stream"].) Current scientific literature makes clear that urbanization of watersheds has dramatic impacts on aquatic resources, and that "end-of-pipe" water quality management approaches (like the detention basins proposed here) are unlikely to work "without understanding the mechanism of the relationship between hydrologic alteration and biotic impairment." (C.J. Walsh et al., The Urban Stream Syndrome: Current Knowledge and the Search for a Cure, 24 J. N. Am. Benthol. Soc. 706, 716 (2005) [Vol. 2, Ex.16].) This is exactly the relationship that the FEIR fails to examine.

The FEIR also improperly dismisses any analysis of the Project's effects on critical habitat for steelhead on the ground that San Mateo Creek was not designated as critical habitat. It fails to mention, however, that the San Mateo Creek was excluded from critical habitat designation only because Camp Pendleton has adopted its own Integrated Natural Resources Management Plan (available at http://www.pendleton.usmc.mil/base/environmental/inrmp.htm) to address that species in lieu of that designation. (Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California, 70 Fed. Reg. 52,488, 52,523 (Sept. 2, 2005) [Vol. 2, Ex. 28-i].) Nowhere did the FEIR mention the existence of this document, the rationale for excluding San Mateo Creek from the critical habitat designation, or the potential effect of the toll road on the INRMP's habitat protection and monitoring efforts.

The FEIR's analysis of cumulative impacts on steelhead and tidewater goby is deeply flawed. A cumulative impacts discussion must include analysis of "closely related past, present, and reasonably foreseeable probable future projects." (CEQA

Guidelines § 15355.) The FEIR, however, focuses only on the toll road itself and a list of future development projects in concluding that cumulative impacts will be less than significant. (FEIR at 5-38 to 5-39.) This completely ignores the ongoing effects of past and present projects, especially in the San Mateo Creek watershed. San Mateo Creek is already highly degraded as a result of agricultural and military activities, and its habitat is in such fragile condition that until recently steelhead and tidewater goby were thought extirpated from the drainage. (See, e.g., P. Higgins, Southern California Steelhead Recovery Assessment: San Mateo Creek, Santa Margarita River: A Wider Role for TU in Protection and Recovery (Jan. 1991), Prepared for the South Coast Chapter of Trout Unlimited [Vol. 2, Ex. 15].) It is now clear that populations of both species are hanging on. The FEIR's failure to analyze the Project's impacts in light of the already tremendous impacts from past and present projects clearly violates CEQA.

In sum, the FEIR either ignored, deferred, or did not properly analyze the effectiveness of proposed mitigation measures in protecting southern steelhead or other fish in San Juan and San Mateo Creeks. These creeks are already substantially impacted, and this Project will only exacerbate problems for the threatened fisheries in these watersheds. Accordingly, there is no substantial evidence to support a determination that these impacts will be less than significant after mitigation.

3. Mountain Lion

The EIR's analysis of impacts to mountain lion is also deficient. As discussed in the attached letter from Peter Beier (Vol. 1, Tab 4), the mountain lion habitat to the west of the proposed alignment – i.e., the habitat that will be cut off from the larger portion of the mountain lion's range to the east of the road – is some of the best foraging habitat available. The FEIR's response that the loss of this habitat is not significant because it comprises only a small loss compared to other much bigger losses is inconsistent with CEQA. (RTC O21-252.) The fact that mountain lion habitat faces substantial threats makes any further loss of such habitat *more* significant, not less. (See Kings County Farm Bureau, 221 Cal. App. 3d 692.) Dr. Beier also points out that the FEIR fails to provide complete or up-to-date data on the effectiveness of wildlife undercrossings for the mountain lion. The FEIR lacks sufficient analysis of the scope of the Project's impacts on the mountain lion, and fails to provide evidence in support of its mitigation strategies.

V. Recreational Resources, Pedestrian and Bicycle Facilities

The recreational resources analysis is one of the most critical portions of the FEIR's analysis – and it is one of the most deficient. Instead of responding to and rectifying the numerous inadequacies noted in our comment letter on the DEIS/SEIR, the TCA continues to gloss over the Project's countless recreational impacts without a sufficient level of analysis to allow decision makers to make intelligent judgments. A legally adequate EIR "must contain sufficient detail to help ensure the integrity of the process of decision making by precluding stubborn problems or serous criticism from being swept under the rug." (Kings County Farm Bureau, 221 Cal. App. 3d at 733; CEQA Guidelines § 15151.) The TCA also misleads the public by making inaccurate statements that are designed to sidestep the serious criticism that this Project would destroy a campground and other valuable state park assets.

San Onofre State Beach. Nowhere is the FEIR more misleading than in its failure to adequately analyze the impacts to San Onofre State Beach ("SOSB"). This park is the sixth most visited state park in California and provides valuable upland habitat as well as coastal beaches, including world-renowned Trestles Beach, affordable camping in the heart of Southern California's heavily urbanized coastal area, and unique habitat for eleven protected species listed as threatened or endangered under federal laws. The preferred alignment of the toll road would destroy and degrade all of these resources, a fact that the TCA never fully acknowledges.

One of the most egregious and implausible conclusions in the entire FEIR is that building this multi-lane highway will have *no direct impacts* to San Mateo Campground. (RTC at 3-74, 3-248, 3-249.) This campground has campsites located within 200 feet of the proposed infrastructure, and the California Department of Parks and Recreation ("Parks Dept.") has specifically stated that the toll road's alignment will "so destroy the recreational value of the campground and sense of place as to render it valueless" and "likely result in the necessity of abandonment of the subunit [including the campground] as a component of the California State parks system." (See Jan. 10, 2006 Parks Dept. comment letter, p. 5.) Indeed, these severe consequences of running the toll road through four miles of the park, taking over a quarter of the land area for the upland unit, were documented in a 1998 Parks Department report commissioned by TCA itself. Yet TCA, without providing any basis, disagrees with these conclusions. (See, e.g., RTC 3-76, 3-249) TCA's failure to disclose the severity of its impacts to the campground and park render its analysis inadequate.

CEQA requires that the TCA give special emphasis to resources like SOSB, which is a unique coastal unit of our State Park system:

> Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project. The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context.

CEQA Guidelines § 15125(c). This provision mandates particularly careful analysis and public disclosure of the many significant impacts to SOSB. Unfortunately, the TCA dismisses such impacts and never considers them in the "full environmental context" of the park. As but one example, the FEIR actually states that

> sound walls would not be considered an adverse impact on recreation resources because it would simply be a wall at the edge of the road or resources.

(FEIR at 4.25-8, 4.25-26.) This statement is flat out misleading in the case of SOSB. The toll road's preferred alignment would go right through the middle of the park, it is not on the edge, and the adjacent *16-foot* sound wall would have an undeniably adverse and intrusive impact on the park and camping experience. (FEIR at 4.25-26.) It is self-evident that people go to parks to escape urbanization, not to camp or recreate beside a 16-foot soundwall. In addition to visual blight, other impacts created by a multi-lane highway running through the park, such as noise and air pollution, will destroy SOSB's natural setting and make the park undesirable for its intended purpose. The TCA never adequately investigates and discusses these impacts.

The FEIR also fails to identify and properly analyze impacts to trails within SOSB. No SOSB trails are identified in the map showing "Trails in the SOCTIIP Study Area." (See Figure 4.5-14; RTC 3-250.) The FEIR simply declines to analyze the impacts of increased noise on trail use, on the ground that no such impacts apply to trails which support "intermittent use." (FEIR, 4.5-9; RTC 3-84, 85) There is no evidence that the SOSB trails are used only "intermittently" – indeed as the Parks Department has made clear in its comments, the campground and trails within the park receive substantial use. The fact that trails are not always continuously occupied is simply the nature of the resource and cannot justify a conclusion that noise impacts to that resource are insignificant.

With regards to visual impacts, the TCA only considered impacts adverse for facilities with previously unobstructed views that are not in proximity to other roads. (FSEIR, 4.5-11.) This is unacceptable - regardless of whether views are already within

the vicinity of other roads, a new multi-lane highway will further degrade such views. Both the noise and visual impacts are especially important in SOSB considering that the very purpose of park trails is to provide quiet and serene recreational experiences.

The FEIR also fails consider impacts related to the destruction of the overall trail connectivity within SOSB. It proposes that certain trails be "reconfigured" without fully considering the impacts and feasibility of changing the route of such trails. (FEIR at 4.25-27; RTC at 3-251.)

Mitigation for damages to SOSB is illusory and deficient. The TCA promises to undertake negotiations with the Parks Department. at a future time without making any commitments. (FEIR at 4.25-28.) Other mitigation measures are tied to the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 which does not address indirect impacts. (FEIR, 4.25-28, 29.) Since TCA claims there are no direct impacts to San Mateo Campground, such mitigation measures would not address displaced camping resources. Further, the Parks Department has clearly indicated that mitigation for SOSB is not possible because "there is no longer adequate open space coastal property to replace that which would be lost at SOSB." (January 10, 2006 Parks Dept. comment letter, p. 11.) Failure to identify or commit to *any* potential mitigation to offset losses of park lands violates CEQA's requirement that mitigation be effective and binding.

We agree with both the Parks Dept. and the California Attorney General's Office ("AG") that the massive infrastructure associated with this super highway is inconsistent with the park's purpose and will destroy SOSB's natural resources and public recreation opportunities. (See Jan. 10, 2006 Parks Dept. comment letter; Jan. 5, 2006 AG's comment letter.) The TCA completely disregards these agencies and fails to address their comments. Indeed, TCA fails to acknowledge that, under state law, the Parks Department has approval authority over any portion of the project that traverses

SOSB, under state law,[7] and thus is a responsible agency under CEQA. (Pub. Res. Code section 21069.)

Widespread public outrage at the toll road's alignment through SOSB is also evidenced by the California State Park and Recreation Commission's resolution opposing an alignment through the park and the City of Oceanside's letter regarding the same. (See California State Park and Recreation Commission, Res. No. 66-2005 Opposing a Proposed Tollroad Alignment and Request for Action to Protect San Onofre State Beach, Nov. 18, 2005 [Vol. 2, Ex. 26]; Letter from City of Oceanside to Gov. Arnold Schwarzenegger, Re: Protect San Onofre State Beach: Oppose Toll Road Alignment, Jan. 6, 2006. [Vol. 2, Ex. 27].) TCA fails to acknowledge the Project's fundamental impacts to our treasured park lands. The failure of the FEIR to accurately disclose the severity of impacts to SOSB or to adequately mitigate those impacts renders the FEIR deficient.

Trestles Beach. The FEIR erroneously concludes that the toll road will have less than significant effects on wave formation at Trestles Beach. To reach this conclusion, the TCA relies on Skelly Engineering reports ("Skelly Reports") that make unsupported assumptions, fail to account for potential impacts to the surf, and use incomplete data. (FEIR at 4.25-27.)

In particular, the Skelly Reports inappropriately focus solely on the volume of the sediment that results from the toll road without accounting for the composition of the sediment which has crucial impacts to the resulting surf formation. (See Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area (Philip Williams & Associates, Ltd., Jan. 11, 2006) [Vol. 1, Tab 6].) The reports assume that because the creek is transport limited (i.e., at capacity for

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[7] As we discussed in our comments on the Draft EIR, construction of the toll road within the park at a minimum requires prior approval by the Parks Department under Streets and Highways Code section 122. Additionally, such construction would require the conveyance by the Department of its rights under its lease with the Navy (which currently prohibits improvements such as the proposed toll road that would interfere with the park's improvements), further triggering the findings requirements of the recently adopted AB 1701 (Pub. Res. Code §§ 5096.500 et seq.). As discussed below, however, other state law specifically prohibits the Department from conveying its leasehold rights in SOSB for any purposes other than park purposes.

sediment), that introduction of additional sediment will not increase sediment delivery. However, increasing sediment to transport-limited streams alters the *composition* of the sediments transported, increasing fine sediment delivery and causing increased deposition of coarser sediment. (Id.) Thus, construction of the toll road may reduce the coarse sediment delivery (and potentially cobbles) to Trestles Beach, even in transport-limited conditions, and thereby impact wave and surfing conditions. (Id.) CEQA requires that these impacts be properly analyzed.

Donna O'Neill Land Conservancy. The Draft EIR ignored the trails and other recreational resources that would be impacted in the Donna O'Neill Land Conservancy. Despite receiving new information relating to these resources, the FEIR does little more than include a map of the trails and note without any analysis that they will be impacted. Nowhere are the numerous recreational and educational uses of the Conservancy or the level of use discussed, nor is the manner or significance of the impacts to the trails discused (See FEIR at 4.5-5, 6; RTC at 3-253.). Further, the mitigation measures for impacts to the Conservancy are deficient, as they merely constitute promises to undertake future negotiations without making commitments or identifying lands to replace those taken in the conservancy. Such mitigation measures fail to comply with CEQA requirements.

B. Cultural, Historic, and Archaeological Resources.

The FEIR fails to adequately identify and analyze impacts to cultural, historic and archaeological resources. These resources are summarily discussed without a full description of the Project's impacts. (FEIR at 4.16-14 to 4.16-16.) By TCA's own admission, eight cultural resources sites have not been evaluated on RMV Lands, Conservancy Land, adjacent to the Talega Development, and along I-5 in San Diego. (RTC at 2-21.) An adequate archeological site survey of SOSB along with additional consultations with local Indian community leaders is still needed. (See Jan. 11, 2006 Parks Dept. comment letter; incorporated herein by reference.)

Moreover, the DEIS/SEIR failed to identify specific archeological sites impacted by the project, including the ethnographic Juaneño village of *Panhe* within the San Mateo Archaeological National Register District and note that it is listed on the Sacred Lands file at the Native American Heritage Commission. Now, the TCA has belatedly attempted to consult with Native California Indians and groups prior to the release of the FEIR. (RTC at 3-98, 99.) This tardy attempt to contact Native American groups frustrates the purpose of CEQA to fully disclose known project impacts to the

interested public and groups during the draft EIR stage. This significant new information regarding *Panhe* and other archeological sites requires that the EIR be recirculated to give the public adequate time to comment on these substantial environmental effects of the Project. (CEQA Guidelines § 15088.5.)

C. The Proposed Project is Contrary to State Law Designed to Protect SOSB as a Park in Perpetuity.

The failure of the EIR to acknowledge the significant recreational impacts of the Project is more egregious in light of existing state law whose specific purpose is to ensure that SOSB can be used solely for park purposes, and that it remains a park in perpetuity. The Government Code states that:

> All real property acquired for park and recreation purposes by the state which was formerly part of Camp Pendleton *shall be used solely for park and recreation purposes* and no part thereof shall be declared surplus or disposed of.

(Gov. Code § 11011.7.) The Parks Department has acquired a leasehold interest in the SOSB property that was formerly used by Camp Pendleton. As noted earlier, this lease prohibits the granting of any easements or rights of way that would interfere with the park's improvements. Thus, any conveyance of such easements or rights of way for purposes of the toll road would violate the lease and would require the Parks Department to give up its rights under that lease. But any such action would be prohibited by section 11011.7, which prohibits the use of SOSB for non-park purposes.

California Public Resources section 5096.400 further provides that "if the Camp Pendleton Marine Base in the County of San Diego ceases to be used as a federal facility, it shall be converted to an open-space area or greenbelt that shall be administered by the department." This indicates a clear intent on the part of the state to preserve the use of SOSB as a park well beyond the current lease term, in perpetity, and to preclude non-open space uses.

These statutes – which are in addition to other more general statutes that are designed to protect state parks from non-park use[8] – make absolutely clear that the state

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[8] See, e.g., Sts. & Hy. Code § 122; Pub. Res. Code §§ 5096.500 et seq.

has specifically made protection of SOSB of paramount statewide importance. TCA's continued insistence on placing its local objectives above those established for the benefit of the people of the state runs afoul of the law. In light of CEQA and the state statutes relating to park land, TCA should abandon consideration of all toll road alignments that traverse SOSB and begin to focus on alternatives that do not infringe on the state's valuable park resources.

VI. TCA's CEQA Findings and Statement of Overriding Considerations Do Not Support Approval of the Project

TCA released its "Findings, Facts in Support of Findings, and Statement of Overriding Considerations" (hereafter "Findings") for the SOCTIIP Project less than a week before the public hearing on the Project, without notice to interested parties. As discussed below, this document contains some entirely new information about proposed mitigation measures, as well as substantial new discussion of the Project's impacts and benefits. The release of this lengthy document so soon before the hearing deprived the public of a reasonable opportunity to comment. We offer the following broad comments but they are not exhaustive due to the short period of time available for public review.

A. Discussion of "Baseline" Condition in the Findings Fails to Disclose EIR's Approach to PM10 Analysis

As discussed above, the EIR uses an improper baseline for determining the significance of PM10 impacts, comparing the alternatives with future rather than existing conditions. This problem is compounded by the Findings, which asserts that existing environmental conditions were used in the analysis, with only one exception identified (not air quality). (Findings at 6.) This mischaracterization further misleads the public by reinforcing the erroneous notion that PM10 emissions will not be significantly different under the Project than they are today.

B. TCA Fails to Support its Findings Regarding Impacts Remaining Significant After Mitigation

1. Perceived Project Benefits Do Not Render Mitigation Measures Infeasible

As a general matter, each discussion of significant and unavoidable impacts includes a purported factual finding that "it is infeasible to avoid" the impact "due to the

economic, social and other considerations described in . . . the Statement of Overriding Considerations." This is improper under CEQA. (See CEQA Guidelines § 15091(f) [statement of overriding considerations "does not substitute for the findings" regarding feasibility of mitigation measures and alternatives].) Accordingly, this statement cannot support any finding that either an alternative or a mitigation measure is infeasible.

2. Findings Regarding Substantial Reduction of Environmental Impacts and Feasibility of Mitigation are Not Adequately Supported

Land Use

The document identifies significant land use impacts in the Cristianitos subunit of San Onofre State Beach and at Camp Pendleton in general. The sole mitigation measure identified in these discussions is LU-1, which provides that "[d]esign refinements to avoid or minimize impacts to existing land uses, related to the temporary use and/or permanent acquisition of property, will be incorporated in the final design, where prudent and feasible." (Findings at 10.) This measure is deferred and non-specific to the point of providing no assurance at all that mitigation will be developed, much less implemented. Accordingly, it cannot support a finding that changes or alterations have been incorporated into the Project which avoid or substantially lessen the significant impact. (CEQA Guidelines § 15091(a)(1).)

Air Quality

The document does not specifically identify the increase in PM10 concentrations, as compared to existing conditions, as a significant impact. (See Findings at 27.) It does identify the long-term NOx emissions as significant, but the mitigation measures discussed (AQ-1 to AQ-5) pertain only to short-term construction impacts. (Findings at 28.) The discussion concludes that it is infeasible to reduce NOx emissions by limiting traffic speeds, but nowhere does it reflect the FEIR's conclusion that the Preferred Alternative was the *worst* among the build alternatives in terms of NOx emissions. (See FEIR Fig. 4.7-4.) As a result, neither mitigation measures nor Project changes have been incorporated into the Project that would substantially lessen this impact. (See CEQA Guidelines § 15091(a)(1).) Therefore, TCA's purported findings are inconsistent with CEQA.

Threatened and Endangered Species

Impacts to coastal sage scrub and gnatcatchers are identified as individually and cumulatively significant after mitigation. (Findings at 59, 62.) The document states that habitat for gnatcatchers will be *enhanced* by the Project, however, due to conservation and restoration at Chiquita Canyon. (Id.) This conclusion is based upon statements *made nowhere else in the Project documents* that 241 acres of additional credit for restoration of sage scrub will be available in Chiquita Canyon, and that this will support an additional 12 gnatcatcher "locations." (Id.) As discussed elsewhere in this letter, there is no evidence in the FEIR that this amount of restoration habitat will be available, approved by wildlife agencies, or successful. Thus this unsupported finding cannot support a conclusion that the proposed mitigation measure will substantially lessen the environmental effects of the Project, as CEQA requires.

The document asserts that wildlife bridges and undercrossings will somehow reduce the impact on gnatcatchers. (Findings at 59, 61.) The FEIR, in contrast, offers no evidence for the unusual proposition that birds like the gnatcatcher will benefit from undercrossings and bridges.

Visual Impacts

The document's findings regarding visual impacts on a variety of resources, but particularly those at Camp Pendleton and San Onofre State Beach, generally lack support. Generic landscaping and design measures, most of which are deferred, do little to reduce the specific impacts identified in the document (such as the sound wall that will block views from Camp Pendleton's San Mateo Point housing, and the flyover interchange that will block views of the San Mateo Creek watershed from I-5 as well as views of the beach from the Cristianitos subunit). (See Findings at 72-73.) General mitigation measures cannot plausibly be found to avoid or substantially lessen specific environmental impacts.

Recreational Impacts

TCA's Findings conclude that the Donna O'Neill Conservancy will suffer from significant and unavoidable short-term air quality impacts and long-term visual impacts. (Findings at 83.) The document purports to make a finding under CEQA Guidelines § 15092(a)(2), i.e., that changes or alterations lessening these impacts are the responsibility of another agency and have been or can and should be adopted by that agency, but provides no factual support for this finding.

The document also concludes that the Cristianitos Subunit at San Onofre State Beach will suffer significant and unavoidable long-term air quality impacts during operation of the toll road. (Findings at 89.) None of the mitigation or avoidance measures mentioned, however, address operational air quality impacts; these measures all address short-term impacts from construction. (See Findings at 89-93.) Again, the document's finding under CEQA Guidelines § 15092(a)(1) is unsupported.

3. TCA Does Not Adequately Support its Findings that Other Impacts Either Are Less Than Significant or Have Been Reduced to Insignificance

Traffic

The document's discussion of the beneficial impacts of the Project is incomplete and misleading. Although TCA touts its finding that the Preferred Alternative results in a savings of 21,000 travel hours (VHT) per day (Findings at 104-05), nowhere does it disclose that this represents a reduction of only one-tenth of one percent as compared to the No Action alternative. (See Smart Mobility Report, Vol. 1, Tab 7, at 9.) This finding thus continues the FEIR's unfortunate tendency to overstate the Project's purported benefits.

More seriously, TCA concludes that indirect impacts on arterials and intersections, "as a result of a change in travel patterns due to" the Preferred Alternative, will be less than significant. (Findings at 107.) As we and numerous others have pointed out over the course of several years, however, TCA has failed to analyze exactly this impact: the induced demand resulting from changed or increased capacity. As a result, this finding is baseless.

Air Quality

TCA finds that operational CO emissions, at arterial intersections and along the corridor, will be less than significant. (Findings at 127.) Again, all of the mitigation measures listed in support of this finding address short-term construction-related impacts, not operational impacts. (Findings at 127-30.) Moreover, the document states that CO concentration levels for toll-free conditions under the Preferred Alternative in 2025 are the "lowest." (Findings at 130.) The FEIR admits, however, that the bonds financing construction of the toll road will not be paid until around 2040, and that tolls thus will almost certainly remain in place in 2025. (FEIR at 7-15.) Tolls operate as a disincentive

to some travelers, who will choose alternate routes (arterials and freeways) under tolled conditions. Incorrect modeling of toll-free conditions in 2025 thus would wrongly show more travelers choosing to use the toll road, which would result in a corresponding decrease in congestion and travel on other roads. These errors would be further reflected in an artificially reduced estimate of air quality impacts—specifically PM10, re-entrained dust, *and CO*—to the extent that arterials and freeways were incorrectly assumed to become less congested. Yet the Findings document relies on exactly this mistake in concluding that CO emissions will be less than significant. This is incorrect, and provides no support for the document's conclusions.

The document's finding that operational PM10 impacts will be less than significant is also flawed. (See Findings at 130.) Again, all identified mitigation measures are construction-related, not operations-related. (Id.) Moreover, the document cites only the *qualitative* PM10 hotspot analysis conducted for purposes of federal conformity regulations, and omits any mention of the *quantitative* analysis that was conducted by TCA's air quality consultant *specifically for CEQA purposes*. (See Air Quality Technical Report (Mestre Greve 2003) at 5-1 ["This section contains additional analysis pursuant to CEQA."], 5-40 to 5-50 [analyzing PM10 hotspots under various alternatives].) As discussed elsewhere in this letter, the quantitative analysis demonstrated that PM10 concentrations at various hotspots would far exceed applicable state standards. (Id. at 5-40 to 5-50.) This is a significant, unanalyzed, and unmitigated environmental impact. The FEIR's flawed and cursory qualitative analysis provides no support for any finding by TCA to the contrary—especially when its own consultant's quantitative analysis demonstrates a serious violation of state standards.

C. TCA's Evaluation of Alternatives is Flawed

Throughout this section of the Findings document, TCA mischaracterizes the relative environmental impacts of the various alternatives. The I-5 and AIO alternatives are rejected out of hand as impracticable "due to the absence of available funding" (Findings at 231_, without any analysis as to why obtaining funding for these projects is infeasible. As a result, the comparative environmental and traffic-related benefits of these projects are never evaluated. Only the three easternmost corridor alternatives receive any sustained discussion at all.

This discussion contains very little by way of comparative analysis, and consists mostly of a description of the Preferred Alternative's benefits. (See Findings at 231-37.) This makes it difficult to ascertain why the Preferred Alternative was selected

as the least environmentally damaging alternative, especially in light of the serious environmental impacts summarized in this section. For example, TCA makes clear that of the 20 crucial wildlife corridors identified in the NCCP planning area, 15 will be crossed by the corridor. (Findings at 231-32.) Wildlife bridges and undercrossings, which the FEIR admits are not suitable for all species, are the only mitigation offered for this dramatic level of habitat fragmentation.

Furthermore, this section makes clear that impacts to Donna O'Neill Conservancy have not been adequately mitigated in the FEIR. Indeed, TCA just now has "initiated discussions" with Conservancy Board members about "potential mitigation strategies." (Findings at 237.) Monetary compensation to the Board, one of the strategies proposed, cannot compensate for recreational and visual impacts that will suffered by the public, and habitat impacts that will be suffered by a wide range of dependent plant and animal species. Mitigation for these impacts obviously is not yet developed, and TCA thus cannot conclude that these impacts have been either substantially lessened or reduced to a less than significant level.

Finally, the description of impacts to cultural and archaeological resources in this section is striking (not to mention different from the discussion in an earlier part of the same document). (Compare Findings at 63-66 with id. at 237.) Of 14 sites eligible for the National Register under either criteria A or D, eight have not been formally evaluated, and avoidance has been achieved for only two sites at the "core" of the area. (Findings at 237.) TCA cannot conclude, on the basis of a lack of formal evaluation, that these highly significant impacts have been lessened to the extent feasible.

In sum, the Findings document overstates the Preferred Alternative's benefits while downplaying its significant environmental effects. Moreover, it fails to support findings required by CEQA with substantial evidence. Accordingly, this document cannot serve as a basis for project approval.

VII. TCA Is Not Exempt from CEQA or Any Other State Environmental Laws As they Pertain to Portions of the Project Within Camp Pendelton.

In the Common Response: State Parks Lease – 1 section of the responses to comments, TCA for the first time makes the remarkable argument that, through a 2000 Defense Authorization Bill rider, Congress intended to preempt all state law, including CEQA, with respect to TCA's construction of a toll road through Camp Pendleton. This expansive reading of the rider is plainly without merit. The rider is directed at the

Secretary of the Navy, authorizing (but not requiring) the Secretary to grant an easement for road purposes within Camp Pendelton. (See Pub. L. No. 105-261, § 2851(a), 112 Stat. 1920, 2219 (Oct. 17, 1998), as amended by Pub. L. No. 107-107, § 2867, 115 Stat. 1012, 1334 (Dec. 28, 2001).) At most, the reference to state laws in that rider affects the *Navy*'s authority. Expansion of this obscure and narrowly-focused rider into a blanket exemption for *TCA* from its state law obligations is inconsistent with the strong presumption against preemption of state police power regulations. (See Cipollone v. Liggett Group, 505 U.S. 504, 516-17 (1992); Lenane v. Continental Maritime of San Diego, Inc., 61 Cal. App. 4th 1073, 1080-81 (1998); see also 1 Laurence H. Tribe, American Constitutional Law 1175-76 (3d ed. 2000) (preemption of state law will not be inferred from an ambiguous congressional statement).)

CONCLUSION

For the foregoing reasons, we urge the Board not to certify the FEIR or adopt the preferred alternative. The Board should direct staff to revise and re-circulate a draft of the EIR in compliance with CEQA, and to consider a new range of options that focuses on improving the existing I-5 corridor. At a minimum, the hearing should be continued to allow the public a meaningful opportunity to participate.

Very truly yours,

William J. White
Kevin Bundy

SHUTE, MIHALY & WEINBERGER LLP

EXHIBIT 2

VOLUME 1

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9 January 2006

Bill White
Shute, Mihaly & Weinberger LLP
396 Hayes St.
San Francisco, CA 94102

Subject: Comments on the Final EIS/SEIR for the SOCTIIP with Emphasis on Inadequate Reponses to Previous Comments Concerning Biological Impacts and Mitigation

Dear Bill:

The Conservation Biology Institute is a nonprofit research and planning institution that provides scientific guidance and review for efforts to conserve biological diversity. As a wildlife conservation biologist with relevant experience in the project area, I have commented previously on biological impacts of the Southern Orange County Transportation Improvement Project (SOCTIIP). My comments on the Draft EIS/SEIR for the project were coauthored with Robert Hamilton and packaged along with other comments submitted by Shute, Mihaly & Weinberger (August 2004). I also wrote a letter to the U.S. Fish and Wildlife Service (11 August 2005) analyzing impacts of eastern SOCTIIP alignments on the continued viability and recovery of the Pacific pocket mouse (*Perognathus longimembris pacificus*), an endangered species with which I have relevant research experience. A copy of that letter to USFWS is attached for the record to this one.

This letter briefly comments on the Final EIS/SEIR for the SOCTIIP. Due to insufficient time for a full review, this letter focuses primarily on how the Final EIS/SEIR responded to some of our previous comments concerning habitat fragmentation effects on wildlife populations and impacts to Pacific pocket mouse. It also makes some observations about the continued reliance on vague, uncertain, and deferred mitigation actions for project impacts.

In general, I find many of the responses to comments to be non-responsive to the specific comments submitted on the Draft EIS/SEIR. Often, the responses simply restate conclusions from the Draft EIS/SEIR and refer to various sections or tables in the Final EIS/SEIR, without responding specifically to the facts, logic, or intent of my comments, and without providing additional factual or analytical support for the conclusions.

I respond to a small proportion of the responses to comments submitted by myself and Mr. Hamilton below.

Inadequacy of Specific Responses to Comments Concerning Habitat Fragmentation

O21-43, 021-221, and O21-249. Our comments suggested that the analysis of habitat fragmentation effects on biological resources was vague, incomplete, and did not make meaningful comparisons between alternatives about the actual, *functional*, effects of the various alignments on *habitats or populations of species of concern*. The primary table used to support the "analysis" of impacts simply provided gross acreages of *vegetation communities*, on either side of alignments, to a *biologically arbitrary and meaningless boundary*, in a format that did not allow for *meaningful comparison* of alternatives' impacts on species of concern.

The response refers again to the same table (4.11-9) of vegetation acreages and concludes that it does provide meaningful and useful information about habitat fragmentation. I still disagree on several counts. First, the response and EIR/SEIR consistently confuse "plant community" with "habitat" (e.g., "Biological habitats are primarily defined by plant communities." O21-43, p. 246). Habitat is *not* synonymous with plant community (as demonstrated by any basic textbook on wildlife biology), and defining habitats using this single variable is highly misleading for many species. Consider, for example, the Pacific pocket mouse--whose habitat is more closely defined by soil characteristics, proximity to coast, and biogeographic history, than by vegetation types. Table 4.11-9 makes no attempt to show how much occupied or potential habitat, for any species, will remain functional on either side of the various alignments; nor do the other sections of the documents referenced in the responses appear to attempt this for most species of concern.

Further, the response and EIS/SEIR provide no factual or logical support for the conclusory statement that the "patch size of natural resources is sufficiently large...with a number of wildlife corridors to adequately provide animals the opportunity to move between the landscape [sic], maintain adequate territory size and provide for genetic dispersal at the regional level…" (O21-249, page 3-342). How large is large enough for any species? How much occupied or potential habitat remains (considering not just gross vegetation acreages, but all of the life requisites that define habitat for a species)? What is territory size for the species of concern, and how many territory equivalents on either side are enough to sustain a population? Table 4.11-9 provides no essential information for understanding the nature of the fragmentation effects on any resource at issue, and its organization obscures rather than illuminates the quantitative information it does present. In conclusion, the comment remains:

There is no useful comparison in the EIS/SEIR of fragmentation effects for populations, *or even of habitat*, for species of concern among the various alignments.

Inadequacy of Specific Responses to Comments Concerning Pacific Pocket Mouse

Comments and responses O21-225 through O21-231 deal with the impacts and mitigation for the critically endangered Pacific pocket mouse. I restrict the following review to just a few of the most egregious problems with these responses. Please see the attached letter to USFWS for a more thorough analysis of impacts for this species.

O21-228. This response fails to answer the principle issues raised by my comments, such as that sampling with trapping surveys never fully documents the extent of either occupied habitat or unoccupied habitat that is essential to a species' continued survival or recovery. The response basically seems to say "we only know where we caught animals in prior surveys, and that is all we consider important to determining impacts." It never addresses the limitations of trap sampling, the natural expansions and contractions of populations, or the documented need to expand Pacific pocket mouse populations to sustain and recover the species under the species' recovery plan (see attached for more detailed discussion of these issues).

At one point, the response appears to trivialize or sidestep the potential for impacts to this tiny population with the statement: "when the impact boundary of the FEC alignment is compared to the *central location* [emphasis added by me] where 33 PPM were trapped in 1995, the alignment is approximately 400 feet from this area." This statement is misleading. The impacts are *immediately adjacent to* (within at most a few feet of) areas proven to have been occupied by Pacific pocket mouse, not 400 feet away. Of what relevance is the geometric centroid of the Pacific pocket mouse capture locations?

O21-229. Again, this response fails to address the central issues raised in the comment, which were that (1) determining significance of impacts on a species should rest on the actual, *functional* effects of the project on individuals and populations of the species, and (2) additional habitat that is critical to the recovery of this species would be directly removed by the project, which is (3) counter to recovery criteria for the species and (4) may be "the last nail in the coffin" for this population (see attached). The response basically says that (1) the population is doomed anyway, (2) capture locations are good enough to represent the number of individuals impacted, and (3) suitable habitat (which may be critical to species' survival and recovery) is unimportant to consider. These are a biologically indefensible conclusions.

(Note also that this response incorrectly refers the reader to O21-26 for further information, although that comment and response are about traffic volumes, not biology; and it refers to itself [O21-229] for further information regarding avoidance of impacts. I assume these are only sloppy errors that should have referred to other comments?)

O21-230. The comment stated that a multi-lane freeway would represent a barrier to movement for Pacific pocket mouse and that wildlife underpasses are untested *for this*

species. The response totally missed the species-specific point by stating that wildlife undercrossings are not untested and have proven benefits. I agree that wildlife underpasses (as well as overpasses, or other crossing improvements) are well studied and can be effective *for some wildlife species;* and *I fully endorse creating scientifically designed crossings at all appropriate locations if this project goes forward*. My point was, however, that underpasses are *completely untested for Pacific pocket mouse* (or for essentially any other species of pocket mouse, or for that matter the majority of wildlife species). Pocket mice are not bobcats or coyotes. They are tiny creatures of open habitats, which may be behaviorally averse to passing through tunnels, and have never been documented to use undercrossings. Based on years of experience with this and other species of small mammals, and based on a thorough professional knowledge of the wildlife-crossing literature, I have strong doubts about Pacific pocket mouse traveling through a long tunnel to get to the other side; and relying on an untested mitigation measure for such a critically endangered species is reckless. Given that prospects for movement between the San Mateo North and South population sites are already constrained, adding this further constraint further reduces the potential for genetic interchange, or for population expansions when climatic factors favor them (see attached).

Continued Reliance on Unspecified, Uncertain, or Deferred Mitigation Actions

O21-268. The response to this comment, concerning reliance on vague, undefined, or ineffective mitigation measures, states that all that CEQA and NEPA require for "adequate mitigation" is (1) a commitment to mitigation and (2) a performance standard. It does not address whether the commitment or the standards are either appropriate or effective. The comment goes on to point out some examples of commitments and performance standards in the EIS/SEIR, such as commitments to 1:1 mitigation ratios for vegetation communities (despite that 1:1 mitigation is inadequate for sensitive vegetation communities, for which there is abundant precedent in southern California). However, commitments for other types of mitigation are often paper promises that are impossible to meet in reality, or are based on performance standards that are not defined. Stating that mitigation "shall provide for wildlife movement," "shall prevent edge effects," or "shall reduce fire frequencies" is simply making paper promises. How will this be accomplished? Good intentions are not the same as physical, on the ground results. The responses repeatedly point to future negotiations with the U.S. Fish and Wildlife Service or other agencies to come up with workable mitigation solutions, whether or not such solutions are actually possible.

One example of this is the reliance on figuring out a location and design for an wildlife undercrossing to accommodate movements by Pacific pocket mouse. As pointed out above, undercrossings are untested for this species. Moreover, even if pocket mice will use an undercrossing, there is no depiction of where this crossing could be created to (1) actually be available to individuals at the San Mateo North Pacific pocket mouse population site, but (2) not remove occupied habitat in order to create the undercrossing. The total avoidance of direct impacts to occupied habitat that is concluded by the impact assessment is based on the assumption that project grading will be confined to the existing Cristianitos road footprint in the vicinity of the San Mateo North Pacific pocket mouse site, along with creation of a "retaining wall" to separate the habitat from the new roadway. However, the Pacific pocket

mouse site is on a hill that rises up from Cristianitos Road. Will the new toll road be at current grade, elevated above it, or cut below it? If at or near current grade, or below it, the only way to create a wildlife underpass in the immediate vicinity of the population would be to remove habitat occupied by Pacific pocket mouse. Since no engineering designs have been disclosed for the road or undercrossing here, it is impossible to evaluate to what degree the mitigation itself may remove habitat or kill individual Pacific pocket mouse. Elsewhere, responses speculate that the undercrossing could be at the small drainage east of the occupied Pacific pocket mouse site, although habitat there is much less suitable for the species due to different soils and denser vegetation. Further analysis is required before concluding that the proposed mitigation actions can be effective for Pacific pocket mouse.

In closing, I repeat that I have only had time to respond to a small sample of the responses to comments for this very complex Final EIS/SEIR. Significant concerns remain that the assessment of biological impacts for this project are incomplete and understated, and the design of workable mitigation solutions is lacking. CEQA requires that projects avoid, minimize, and mitigate impacts, in that priority order. By selecting one of the most environmentally damaging alternatives as the preferred alternative, this project appears to violate this priority order. Moreover, the mitigation actions it proposes seem inadequate and in some cases undefined. Given the regional extent of the project's impacts on biological diversity, this is very troubling.

Sincerely,

Dr. Wayne D. Spencer
Senior Conservation Biologist

Attachment: Letter to Jill Terp, U.S. Fish and Wildlife Service, 11 August 2005.

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11 August 2005

Ms. Jill Terp
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92009

Subject: Review of Impacts to the Endangered Pacific Pocket Mouse by Eastern Alignments of the Proposed Southern Orange County Transportation Improvement Project

Dear Ms. Terp:

The Conservation Biology Institute is a nonprofit research and planning institution that provides scientific guidance and review for efforts to conserve biological diversity, such as habitat conservation plans and endangered species recovery plans. This letter analyzes potential impacts of the Far East Corridor (FEC) alignments of the proposed Southern Orange County Transportation Improvement Project (SOCTIIP) on the endangered Pacific pocket mouse (*Perognathus longimembris pacificus*; hereafter PPM). We offer this information to assist the Service in its analyses for the Biological Opinion it must prepare for the project under Section 7 of the Endangered Species Act.

Our analysis concludes, contrary to analyses in the Draft Environmental Impact Statement and Supplemental Environmental Impact Report (EIS/SEIR) for the SOCTIIP project, that the FEC alignments of the proposed toll road, in the vicinity of San Mateo Creek, near the northwest corner of San Diego County, California, are likely to

(1) directly impact individuals, occupied habitat, and potentially occupied habitat that is essential to the survival and recovery of this endangered species;

(2) appreciably increase the risk of extirpation of this population, which in turn would appreciably decrease the likelihood of survival and recovery of the species as a whole; and

(3) preclude achieving recovery criteria mandated by the Final Recovery Plan for the species (USFWS 1998).

These findings would require a Jeopardy Opinion under Section 7 of the federal Endangered Species Act, as defined in the Consultation Handbook for Section 7 consultations (US Fish and Wildlife Service and National Marine Fisheries Service 1998).

Qualifications of Commenter

I am a mammalogist and conservation biologist who has coordinated, performed, or assisted with a variety of research and survey projects for the PPM since 1995 (e.g., Ogden 1995, 1997; Spencer et al. 2000a, 2000b, 2001; Swei et al. 2003; Spencer in Press). These projects have included surveys to document the distribution, abundance, and habitat requirements of PPM, as well as applied research to inform recovery efforts for it pursuant to the PPM recovery plan (USFWS 1998). I have performed or participated in field work on the species within all four known occupied PPM sites (see below), and was responsible for discovering and delineating one of these four occupied sites (the so-called "San Mateo South" PPM site; Ogden 1995). I have also communicated and coordinated closely with USFWS biologists involved in PPM research and recovery planning since 1995, and have worked with them in the field both as a contractor and as a volunteer.

Because of these studies, and others in the vicinity of the FEC alignments, I am intimately familiar with the PPM population sites and general biological conditions in the vicinity of the alignments, including the known occupied PPM habitat site closest to the FEC alignments (the so-called "San Mateo North" PPM site). I have visited that site on numerous occasions since 1995 to assist with trapping studies, collect PPM hair for genetic study (Swei et al. 2003), and assess habitat quality and potential management actions to benefit the population. I visited the site most recently on July 9, 2005, to assess current habitat conditions inside and outside of the known occupied habitat area in preparation for this analysis.

Background Information on Pacific Pocket Mouse

The PPM was emergency listed by the U.S. Fish and Wildlife Service (USFWS) as Endangered in 1994 after a small population was rediscovered at Dana Point more than 20 years after the species was presumed extinct (Brylski 1993, Spencer In Press). It is also listed as "Critically Endangered" by the IUCN on its Red List of worldwide-endangered species (http://www.iucnredlist.org/). Critically Endangered is the highest threat rating (short of "Extinct in the Wild") on the IUCN Red List. It means "facing an extremely high risk of extinction in the wild in the near future." The USFWS finalized a recovery plan for the species in 1998 (USFWS).

The PPM is an extreme habitat specialist, living only on very fine loamy sands with sparse vegetation within 3 or 4 miles of the coast (Spencer In Press, USFWS 1998). Extensive surveys since 1993 have covered all historic locations and essentially all potential habitat for the species, finding a total of four occupied sites scattered along 25 miles of coastline between Marine Corps Base Camp Pendleton in northern San Diego County and Dana Point in southern Orange County. All of these sites were discovered during the period 1993-1995; no additional populations have been discovered in the last 10 years, despite intensive survey efforts, and these four sites are considered to support the entire extant population of the species (Spencer In Press; USFWS 1998). Three of these remaining population sites are very small (supporting no more than 50 individuals each) and highly susceptible to extirpation. One population, on the Oscar One Training Area of Marine Corps Base Camp Pendleton, numbers in the hundreds and is somewhat more secure (Spencer In Press).

San Mateo North PPM Site

One occupied site, referred to as San Mateo North, is within the SOCTIIP project area and *immediately* adjacent to (if not within) the FEC alignments near their junctions with Interstate 5 (see Attachment A). This population is very small: Intensive trapping studies captured 37 individuals there in 1995 and 22 in 1996, but subsequent efforts have captured fewer than 10 individuals in any year (S.J. Montgomery personal communications). The most recent trapping effort, in 2003, captured only 4 individuals (Natural Resources Assessment [NRA] 2003).

Demographic Considerations

Despite the very small population sizes recorded in recent years at San Mateo North and other PPM sites, it must be noted that heteromyid rodents in general, and silky pocket mice (*Perognathus* spp.) in particular, are notorious for persisting at very low densities for years, and then increasing under certain favorable environmental conditions to much higher numbers (Brown and Harney 1993, Brown and Zeng 1989, Zeng and Brown 1987, Chew and Chew 1970, Hall 1946). These irregular population spikes are apparently triggered by complex interactions between weather, soils, vegetation, and species' life-history strategies (Brown and Harney 1993). They reflect a general life-history strategy of heteromyid rodents, which for their size have relatively long life spans (up to 8 years in *Perognathus longimembris*; Edmonds 1972) and low reproductive rates under most conditions, but the ability to reproduce early (within 41 days of their birth) and to produce multiple litters per year under favorable conditions (Hayden et al. 1966). Heteromyid rodents also have relatively low metabolic rates, and they store seeds for later consumption when seeds are abundant. These life history traits allow little pocket mice to persist at low population levels, dominated by adults surviving from one year to the next through periods of unfavorable conditions (e.g., extended drought), but to take advantage of favorable conditions with rapid recruitment of juveniles (Conley et al. 1977, Whitford 1976, Brown and Harney 1993). The resulting population spikes can increase local population densities by several orders of magnitude, with populations becoming

dominated by young animals (e.g., Brown and Harney 1993, Zeng and Brown 1987, Petryszyn 1982). Under these high-density conditions, young animals disperse and populations expand into previously unoccupied habitat areas, recolonizing areas of suitable habitat from which populations had become extirpated, and allowing genetic exchange between previously isolated populations. Thus, the ability of populations to take advantage of favorable conditions by dispersing and expanding is essential to maintaining the demographic and genetic integrity of populations over the long term.

Based on the above discussion, the ability of the San Mateo North population to disperse and expand under favorable environmental conditions is critical to its continued survival and recovery. On Attachment A, I mapped areas I consider minimally essential to accommodating potential population expansions. These are already quite constrained in size by existing roads, housing, and other developments, and any further reduction in their size would be detrimental. Although much of the area I mapped as essential is not currently optimal in habitat quality (due to a historic home site, historic agricultural disturbance, exotic plant species, and soil compaction) these areas could nevertheless become occupied during future population expansions, especially if improved by active habitat management (potentially including soil manipulations, vegetation thinning, and exotic species control). Note that PPM have been captured in areas of suboptimal soils (e.g., loams considered too high in clay and gravel content; USFWS unpublished data from the Oscar One soils study) on the Oscar One and Edson Training Ranges of Camp Pendleton, but near to (within a few hundred meters of) higher suitability areas supporting larger numbers of individuals (unpublished data compiled from numerous trapping studies by Marine Corps Base Camp Pendleton; S.J. Montgomery personal communication; and W. Spencer personal observations).

Genetic Considerations

Pocket mice at the San Mateo North site may currently interbreed with individuals at a second site (San Mateo South) about 1 mile east of FEC alignments (Attachment A), and they likely do interbreed during periods of population expansion and dispersal as described above. Based on a variety of evidence (including locality descriptions for specimens at the San Diego Natural History Museum and San Bernardino Natural History Museum, 1903 to 1931, and soils maps, intensive habitat studies, and habitat modeling efforts [Spencer et al. 2001, Spencer In Press, USFWS unpublished data]), the two San Mateo sites represent two remnants of what was once a much larger, more continuous population of PPM occupying fine sandy soils near the mouths of San Mateo and San Onofre Creeks, and especially in the deeper sandy soils of the river valleys and coastal plain—which were subsequently converted to farmland and other developed uses (San Onofre Nuclear Generating Station, Interstate 5, etc.). Moreover, genetic analyses of all four extant Pacific pocket mouse populations, as well as historic populations no longer in existence (DNA samples from museum specimens) suggest that individuals at these two San Mateo sites are closely related (Swei et al. 2003), further supporting that they were, at least prior to twentieth-century development, two portions of one interbreeding population (and they may still exchange genes during rare dispersal events). Although

the number of mitochondrial DNA samples examined at these sites is limited (5 individuals from San Mateo North and 10 individuals from San Mateo South), the genetic results are consistent with the hypothesis that these two sites represent two samples of genetic diversity from a once larger, more continuous population, and that each site may have some genes not found at the other site (due to population sampling effects and small remaining population sizes). Moreover, the San Mateo sites have some haplotypes (mitochondrial gene varieties) apparently not found in the other extant sites—Oscar One or Dana Point (Swei et al. 2003). Thus, although the two San Mateo populations are genetically closely related, both of them appear to contribute to the overall genetic diversity of the species as a whole. Consequently, losing the San Mateo North site would probably mean losing genetic diversity for the species as a whole, which is directly counter to species recovery criteria (see below).

Recovery Criteria for Pacific Pocket Mouse

USFWS (1998) determined that the PPM could be reclassified from Endangered to Threatened once the following criteria are met:

1. Ten populations that are independently viable (each with a 95% or greater chance of surviving for 100 years) and stable or increasing are conserved.
2. Occupied habitat consists of at least 2,000 ha (4,940 acres) that are permanently conserved.
3. All PPM populations are managed to maintain genetic diversity for future generations.
4. All PPM populations and *essential habitat* are managed to eliminate or minimize threats to species persistence, where *essential habitat* includes potential habitat that is necessary for the full recovery of the species.

Two additional criteria must be met for full delisting:

5. Any necessary protection, restoration, and enhancement activities are successfully completed on all sites considered essential to recovery.
6. Populations represent the full, existing genetic diversity and full historical geographic range of the subspecies, and occur in habitats that collectively represent the full range of environmental characteristics of the species' historic range.

Meeting even the criteria for downlisting to threatened will be very difficult, and would absolutely require increasing both the number of occupied sites (from 4 to 10) and the size of these sites and their populations. With the possible exception of the largest population site (Oscar One), none of the extant sites currently meets the criterion of being "independently viable" due to very small population sizes (populations of any species of less than 50 breeding individuals are not expected to persist for many generations, due to

demographic and genetic stochasticity—Franklin 1980, Soulé 1980). Thus, any action that removes options for expanding occupied sites and increasing population sizes to viable levels would be directly contrary to the Service's recovery criteria—or in other words, would *preclude recovery*, because other options for new or expanded population sites are severely limited by existing development patterns (Spencer et al. 2001, Spencer In Press).

Note also the importance of "potential habitat" as "essential habitat" for recovery. Any currently unoccupied habitat near currently occupied PPM sites must be considered essential, given the need to expand populations, as well as the requirement to manage to reduce threats (i.e., management "buffers"). Any action that removes such essential habitat (potential expansion sites or management buffers) would be directly counter to recovery criteria and hence would preclude recovery.

Direct and Indirect Impacts of SOCTIIP Alignments on PPM

Depending upon the actual distribution of PPM individuals at the time of construction, construction of the SOCTIIP alignments (note yellow lines on Attachment A, which depict limits of grading) (1) may directly kill some individuals, (2) will probably remove some occupied habitat (i.e., habitat at least occasionally used by individuals during their normal home range movements), and (3) will surely remove habitat that could be occupied in the future, either during natural population increases or due to active management to facilitate population expansions.

<u>Direct Take of Individuals</u>

The SOCTIIP EIS/SEIR concludes that there would be no direct impacts to PPM: "…grading limits of the Alternatives would narrowly avoid the known population of Pacific pocket mouse (which ranges from immediately adjacent to the grading limits…)." This conclusion is based on the faulty assumption that the precise points at which individual mice entered live traps during surveys (blue dots on Attachment A) represent the entirety of occupied habitat. Contrary to this assumption, (1) trapping provides point samples, not a complete delineation of occupied habitat, (2) not all mice enter traps, (3) animals move, and (4) populations expand and contract over time (as discussed above). Although PPM space-use patterns are poorly documented, *Perognathus longimembris* individuals have been found to occupy home ranges as large as 3.1 ha (7.6 acres; Maza et al. 1973) and may move up to 305 m (1,000 ft) from their burrows during a night of foraging (Burt and Grossenheider 1976). Based on my observations at the San Mateo North site, it is likely that some individual Pacific pocket mice forage within areas included in the limits of grading; and even if no individuals currently occupy burrows within the limits of grading, they probably have in the past and may again in the future. Thus, construction of a SOCTIIP FEC alignment has the potential to directly kill individual PPM.

Direct Take of Occupied Habitat

Even if no individual PPM are directly killed by project construction, individuals undoubtedly sometimes venture into areas within the limits of grading during foraging, searching for mates, or dispersal. Analyzing take of occupied habitat should at least include analytically "buffering" capture location points with polygons approximating expected home range areas. Given uncertainty about the size of local PPM home ranges, I believe a reasonably conservative approach is warranted. Although Burt and Grossenheider (1976) estimated movements as far as 305 m (1,000 ft) from a home burrow, this distance may be unreasonably large for assessing occupied habitat (although it may be appropriate for estimating dispersal). A more reasonable, but still conservative estimate would assume a circular home range of about 3.1 ha (based on the Maza et al. 1973 measurements) centered on capture points—or a radius of about 100 m. Assuming a 100-m buffer around mapped points would include some occupied habitat within the limits of grading shown on Attachment A. Based on this approach, construction of the SOCTIIP FEC alignments would remove a yet unquantified area of occupied PPM habitat. Also, note that even this analysis assumes that capture location points accurately reflect the actual distribution of PPM individuals, which may not be true, because individuals rodents are not all captured on the spatially restricted trap lines set by biologists.

Direct Take of Potential and Essential Habitat

Despite some uncertainties in estimating direct take of individuals or currently occupied habitat, the FEC alignments would remove some habitat that should be considered "essential" as defined by the Recovery Plan (USFWS 1998). Such potential/essential habitat exists immediately north, south, and east of the mapped occupied area, including areas within the limits of grading for FEC alignments (magenta polygons on Attachment A).

Indirect Take of Individuals, Habitat, and Potential/Essential Habitat

In addition to the direct taking by construction activities of individuals, occupied habitat, or potential but currently unoccupied habitat, building the SOCTIIP FEC alignments would impose indirect effects on the population, occupied habitat, and potential/essential habitat. The SOCTIIP EIS/SEIR acknowledges that "long-term impacts could occur to…Pacific pocket mouse," and "[the FEC alignments] could result in indirect impacts to the species due to noise, lighting, and other edge effects." An analysis of take must expand on these statements to consider the likely effects of these and other indirect effects on the continued survival and recovery of the San Mateo North population. Given the small size of this population (varying from about 4 to 40 individuals over the past 10 years), it is my professional opinion that even relatively minor or incremental effects of these influences on habitat quality or individual pocket mice will appreciably increase the population's probability of extirpation. In other words, for such a small population, *any*

increase in mortality rate, or decrease in reproductive rate, will have dramatic effects on the probability of extinction (Lande 1988, Soulé 1980).

The range of such indirect impacts on the population may include occasional road kill (depending on road design), preclusion of natural population expansions, increased spread of exotic species, soil pollution, changes in runoff (affecting soil moisture, vegetation composition, and vegetation density), and increased nighttime light and noise (changing individual behavior, creating stress, and possibly increasing predation rates). Predation rates by house cats may increase, as cats that currently can cross the site from San Clemente housing to more extensive habitat areas to the south and east will be concentrated in this narrow wedge of habitat, between San Clemente and the toll road. Similarly, the degree of human trampling and soil compaction may increase, as recreationists from San Clemente (e.g., walking dogs, mountain biking) are precluded from crossing the road and concentrate in the existing habitat area.

The SOCTIIP proposes to avoid direct impacts to PPM by separating the roadway from the habitat area with sound walls. However, walling the population into a narrow wedge of currently occupied habitat between existing development and a new roadway could actually increase exposure of the population to the indirect impacts discussed above. Perhaps most important, this walling in of the population between the toll road and San Clemente will preclude natural expansions and contractions of the population, thereby contributing to genetic drift, inbreeding depression, and demographic stochasticity. This greatly increases the probability of population extirpation. These impacts would be exacerbated by the greatly reduced potential for countering adverse effects with habitat improvements or habitat expansion at this site.

Precluding Recovery

As evident from the above review of the Recovery Criteria published by the USFWS (1998), construction of the FEC alignment is directly counter to all recovery criteria for the species and would therefore preclude its recovery. Recovery will require *increasing* the area of occupancy and the number of individuals living at San Mateo North, buffering this population from adverse edge effects, allowing for natural population expansions and dispersal, and maintaining the full extent of genetic diversity. Building a FEC alignment would be counter to all these requirements: It would reduce the size of the occupied area, remove any potential management buffer, increase edge effects, prevent natural range expansions, impede dispersal, and contribute to loss of genetic diversity. These changes will all increase the likelihood of population extirpation. Thus, the project would likely eliminate one out of four remaining PPM populations, along with the portion of extant genetic diversity it represents for the species as a whole.

Maintaining potential genetic interchange between the San Mateo North and San Mateo South populations is also essential to species viability and recovery. Although the current level of genetic exchange between the two San Mateo populations is uncertain, building any of the FEC alignments would preclude attempts to improve connectivity between

these two populations. A multi-lane toll road would represent a complete barrier to dispersal. The proposed mitigation of siting an underpass for Pacific pocket mice "somewhere" in the vicinity is completely untested and uncertain to provide any benefits to the species, even if a suitable location could be found.

In summary, direct and indirect impacts of the SOCTIIP FEC alignments on Pacific pocket mouse would preclude attainment of any of the Recovery Criteria established to down-list or de-list the species (USFWS 1998).

Conclusions Concerning Species Jeopardy

Under Section 7(a)(2) of the Endangered Species Act, the Service must, as part of its Biological Opinion for a federal project, determine if the project might "jeopardize the continued existence of any listed species" or "result in the destruction or adverse modification of designated critical habitat." Regulations implementing these mandates define "jeopardize the continued existence of" as "to engage in action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (USFWS and NMFS 1998). The foregoing analysis demonstrates that construction of a SOCTIIP FEC alignment would appreciably increase the risk of extirpation of the San Mateo North PPM population. Losing one out of only four populations would, in turn, increase risk of extinction for the species as a whole. Moreover, this project would preclude recovery of the species by being counter to all recovery criteria spelled out in the Final Recovery Plan. In short, the project would jeopardize the continued survival and recovery of *Perognathus longimembris pacificus*.

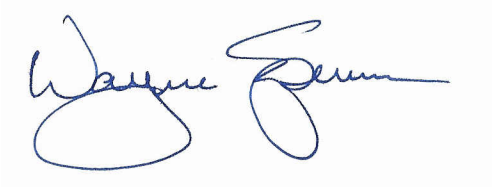
Finally, although the Service chose not to designate Critical Habitat for the PPM, the definition (and intent) of Critical Habitat is to identify those areas considered "essential to the conservation (recovery) of listed species" (USFWS and NMFS 1998, page 4-33). The Recovery Plan for PPM (USFWS) defines such "essential habitat" as including "both suitable and potential habitat that is necessary for the full recovery of the subspecies" (USFWS 1998 page *iv*). This project would remove such "essential habitat," which is functionally if not legally equivalent to "destruction or adverse modification of designated critical habitat."

In summary, construction of a SOCTIIP FEC alignment would

- take individuals and habitat of the critically endangered Pacific pocket mouse;
- destroy and adversely modify habitat essential to the continued survival and recovery of the species, and
- preclude meeting species recovery criteria.

Therefore, a SOCTIIP FEC project would *jeopardize* the continued survival and recovery of the Pacific pocket mouse. No known mitigation actions are likely to adequately counter these effects.

Sincerely,



Dr. Wayne D. Spencer
Senior Conservation Biologist

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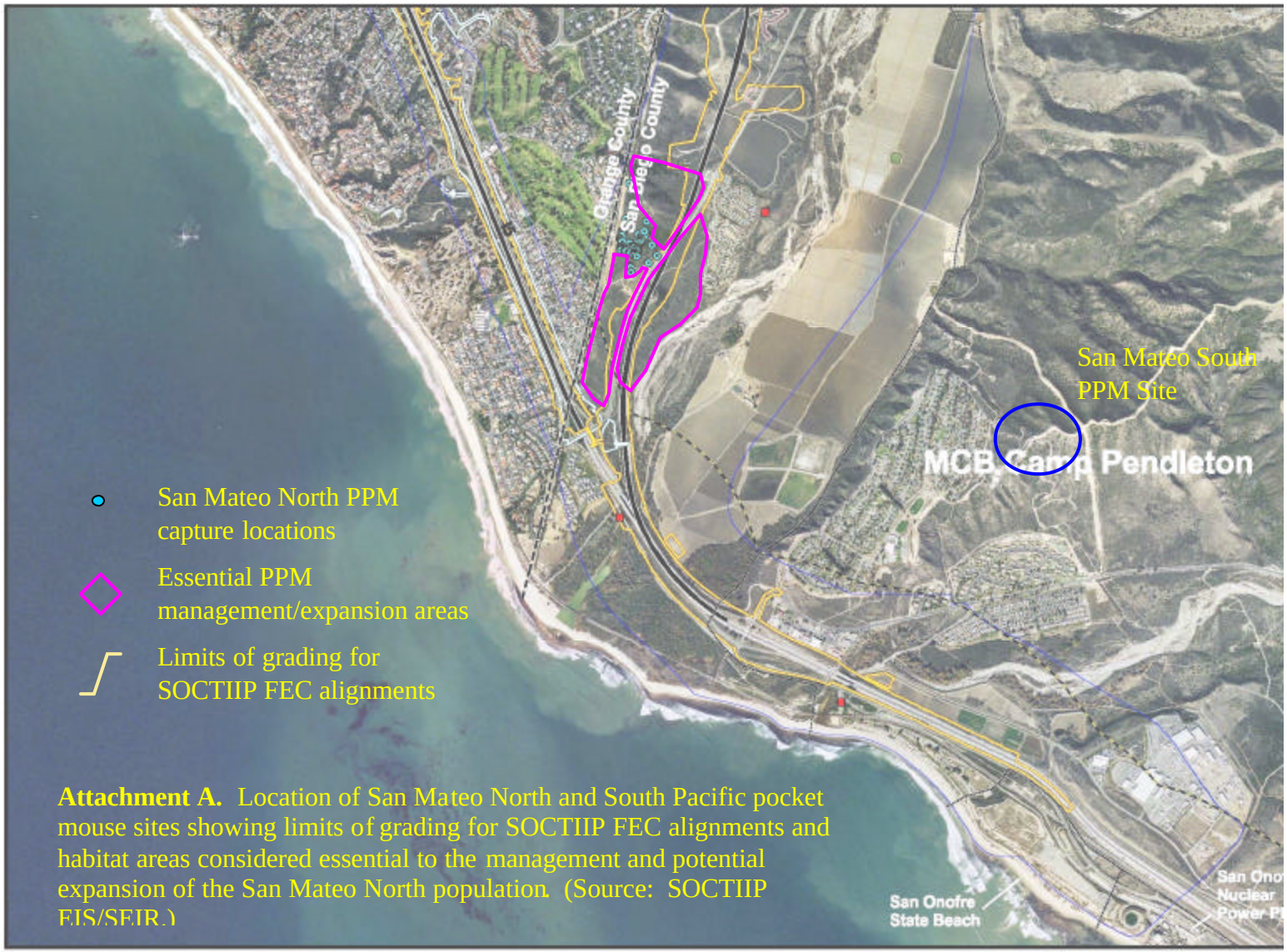

Attachment A. Location of San Mateo North and South Pacific pocket mouse sites showing limits of grading for SOCTIIP FEC alignments and habitat areas considered essential to the management and potential expansion of the San Mateo North population. (Source: SOCTIIP FIS/SFIR.)

EXHIBIT 3

VOLUME 1

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San Diego Office

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January 9, 2006

Mr. William White
Shute, Mihaly & Weinberger
396 Hayes Street
San Francisco, CA 94102

Subject: Reponses to Comments for the Subsequent Environmental Impact Report South Orange County Transportation Infrastructure Improvement Project FHA-CA-EIS-04-01-D

Dear William:

The Conservation Biology Institute (CBI) is providing these comments on the subject document on behalf of Endangered Habitats League. In general, we do not believe that our original comments were adequately addressed by the responses to comments on the Draft Environmental Impact Statement/Subsequent Environmental Impact Report (DEIS/SEIR), and that significant, unmitigated impacts to biological resources will occur from implementation of the proposed project. While a variety of significant construction-related impacts to hydrology and water quality are acknowledged, these impacts and their potential adverse effects on federally listed aquatic species, such as southern steelhead and tidewater goby, are never adequately analyzed or described. For example, no scientifically based thresholds or effects levels for water quality constituents, such as sediment, nitrogen compounds, or oil and grease, are provided, despite the sensitivity of steelhead and tidewater gobies to these substances. Likewise, thresholds of significant hydrologic effects on these species are not specified or analyzed.

Salmonid species, such as southern steelhead, are known to be sensitive to water quality changes. In particular, a great deal of research has focused on the adverse effects of increases of fine sediment to salmonids. Excess fine sediments in salmonid streams can cause direct mortality, increase stress levels, reduce reproductive success by smothering eggs, and decrease feeding success by reducing visibility and reducing the invertebrate

prey base. Herbert and Merkins (1961) found substantial mortality (>50% of animals tested) of rainbow trout yearlings at suspended sediment concentrations of 270 and 810 mg/L, and Servizi and Martens (1992) recorded an 8-fold increase in gill-clearing behavior (gill-flaring and "coughing") at suspended sediment concentrations of 230 mg/L. Reiser and White (1988) showed that steelhead trout eggs exhibited little survival when fine sediment (<0.84 mm) exceeded 20% of their redds (salmonid nests), and Hall (1984) found little salmonid egg survival when fines constituted 10% of spawning gravels. A threshold of 20% fines (<0.8 mm) has been accepted as the level at which significant mortality of salmonid embryos is expected (Waters 1995). The construction of the proposed project is expected to drastically increase the production and transport of fine sediments in the watershed and alter the structure and function of channel habitats (PWA 2006), thus it is highly likely that southern steelhead will be significantly affected by the proposed project. The DEIS/SEIR does not adequately analyze the potential impacts of the proposed project in light of these and other data and scientifically established effects thresholds on salmonids.

Tidewater goby habitat is restricted to a narrow range of estuary salinities, which may be altered by changes in freshwater runoff from the watershed as a result of the proposed project. Tidewater gobies prefer coarse sandy substrates for breeding, and thus their reproductive success is sensitive to increases in fine sediment production from watersheds and transport to coastal lagoon habitats. Changes in water quality and increasing sedimentation have been identified as threats to this species by the U.S. Fish and Wildlife Service. The dramatic increase in fine sediments transported to the goby's coastal lagoon habitat as a result of the proposed project will likely produce significant adverse impacts to this species, which were not adequately addressed in the DEIS/SEIR.

Construction of the project will produce "massive changes" in the hydrology and sediment production characteristics of the subwatersheds it traverses (PWA 2006). Proposed mitigation, including preparation of a Biological Resource Management Plan (BRMP), review of the design plans by a Project Biologist, consultation with state and federal wildlife agencies, and use of Best Management Practices (BMPs), is deferred to the future, and thus has an unknown ability to protect these species from adverse project-related impacts. Even if BMPs proposed for the project will meet water quality levels in the "applicable RWCQB Water Quality Control Plans," this does not automatically confer adequate protection to the listed fish species, as these levels were not specifically derived to be protective of these species. Alternatively, the DEIS/SEIR states that water quality would be protected to a "Maximum Extent Practicable (MEP)" standard. In fact, water quality levels attainable by the MEP standard are undefined and unknown, and thus cannot be considered to adequately protect these fish species. The ability of a BMP or specific design modifications, which will be prepared at some time in the future, to adequately mitigate significant environmental impacts to listed fish species cannot be assessed at this time and, therefore, cannot be considered adequate mitigation for these impacts.

The DEIS/SEIR and the responses to comments do not adequately acknowledge or analyze indirect and cumulative impacts of the proposed project on southern steelhead and tidewater goby. The focus of BMPs and runoff management is to address construction and direct impacts of the project. The responses to comments state that the project may affect 2% of the *entire* San Mateo Creek watershed, but this means that a number of individual subwatersheds within the watershed will have as much as 100% of their drainage area affected by the toll road, with as much as 29% of that area being impervious surface cover (PWA 2006). A number of published scientific studies have documented that significant adverse effects to hydrology, water quality, and aquatic species can occur with areas of impervious surface cover as low as 10% of drainage basin area (Klein 1979, Booth and Jackson 1997, Paul and Meyer 2001). The document also does not consider other development projects in the San Mateo and San Juan creeks watersheds that contribute to cumulative adverse effects on hydrologic regimes and water quality.

Please feel free to contact me if you require additional information or clarification.

Sincerely,

Michael D. White, Ph.D.
Senior Ecologist

Attachment

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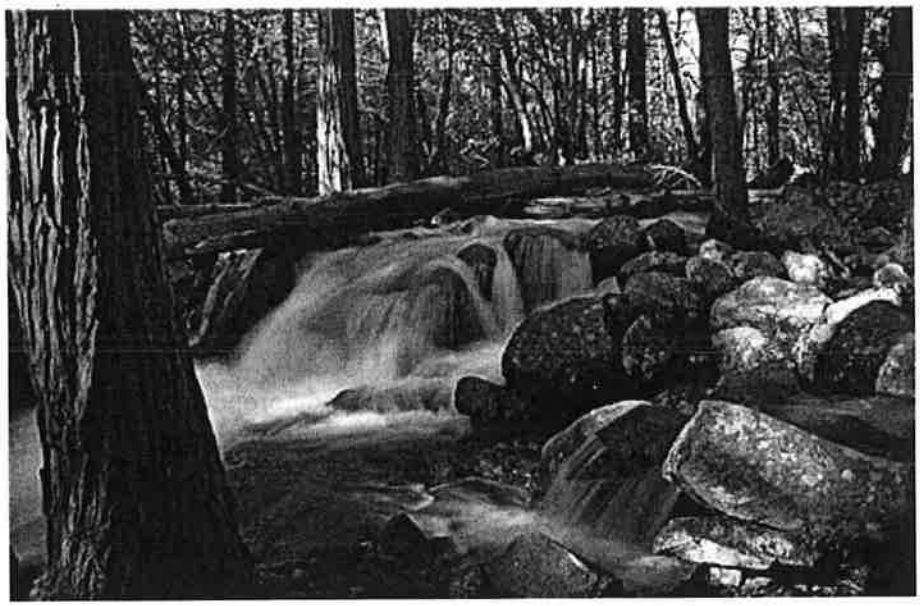
EXHIBIT 13

VOLUME 2

Swimming Upstream: Restoring the Rivers and Streams of Coastal Southern California for Southern Steelhead and other Fishes

Prepared by Kevin Finney and Jim Edmondson

Prepared for the Southern California Steelhead Recovery Coalition



American Whitewater Association, California Trout, Center for Biological Diversity, Clean Up Rincon Effluent, Conception Coast Project, Ecology Center for Southern California, Endangered Habitats League, Environmental Defense Center, Friends of the Los Angeles River, Friends of the River, Friends of the Santa Clara River, Friends of the Ventura River, Heal the Bay, Keep the Sespe Wild Committee, Mailbu Resouces Conservation District, National Audubon Society (Buena Vista Chapter), National Audubon Society (Palomar Chapter), Natural Resources Defense Council, Pacific Coast Federation of Fishermen's Association, San Diego Trout, Santa Barbara SEA, Santa Monica Mountains Conservancy, Sierra Club (Angeles Chapter), Sierra Club (San Diego Chapter), Sierra Pacific Fly Fishers, Surfrider Foundation, Surfrider Foundation (Ventura Chapter), The Audubon Center, Trout Unlimited and Wilderness Fly Fishers

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PART I. EXECUTIVE SUMMARY

Southern California is home to the southernmost extant populations of steelhead rainbow trout. These fish possess unique adaptations, represent an important part of the state's anadromous resources, and serve as vital indicators of the overall health of the aquatic ecosystems of Southern California coastal watersheds. Until the listing of southern steelhead as an endangered species under the Federal Endangered Species Act (ESA), scant attention had been paid to these unique and magnificent fish. While renewed attention has been focused on the almost forgotten populations, there continues to persist an imbalance in the effort being made to restore California anadromous fish heritage. The Southern California Steelhead Recovery Coalition (SCSRC) has been created as a vehicle to mobilize the interests, energies, and political will of the Southern California community on behalf of these resources. As part of this effort, the SCSRC has identified steelhead as the key to restoring the full range of fish fauna of Southern California aquatic systems and their watersheds, and identified basic priorities in accomplishing these goals. These include: focusing on restoring fish passage to historic spawning and rearing areas, addressing watershed wide degradation of aquatic ecosystems, and ensuring adequate representation of Southern California interests in all state and federal programs designed to address the recovery of steelhead in California.

PART II. INTRODUCTION

Rivers and streams have often been described as the "arteries and capillaries of the earth," providing the pathways for water and nutrients essential for all life. Indeed, healthy "riparian ecosystems nourish and sustain the most complex and important food chains in nature, distributing nutrients, carrying off waste, pulsing with life. They are the breeding grounds, the nurseries, and the habitat for a bewildering variety of species, and they are the natural systems most vulnerable to the destructive impacts of human development." (Bolling, 1994) Rivers and streams maintained in their wild state not only sustain complex ecosystems, they also provide valuable fisheries, recreation opportunities, urban amenities, natural flood protection mechanisms, and spectacular beauty. (Bolling, 1994)

Despite their many values, the rivers and streams of California have been under siege for over a century, and the many species they support have been greatly diminished or driven to extinction as a result. Perhaps the most spectacular example of the destruction of California's aquatic systems is the Los Angeles River which, from its beginnings in the suburbs of the San Fernando Valley to its mouth at the Pacific Ocean, is almost entirely lined with 50 miles of concrete. Geographer, Blake Gumprecht in the first comprehensive history of the

Los Angels River, described the river's features before they were all but obliterated by the vast urban sprawl which has blighted much of Southern California:

Three centuries ago, the river meandered this way and that through a dense forest of willow and sycamore, elderberry and wild grape. Its overflow filled vast marshlands that were home to myriad waterfowl and small animals. Steelhead trout spawned in the river, and grizzly bears roamed its shores in search of food. So lush was this landscape and so unusual was it in the dry country that the river was a focus of settlement long before the first white man set foot in the area.

In the artificial landscape that is contemporary Los Angeles, where even the palm trees have been imported, perhaps nothing symbolizes the role of human beings in changing the face of the earth more than the exploitation and transformation of the Los Angeles River.

Recently, efforts to restore wild salmon runs in the Pacific northwest have captured public attention. In an effort to support this process, the Sierra Club has conducted a public education campaign for four "Rules for Recovery." These four rules, known by the acronym W.I.L.D., focus on Watershed protection, maintenance of In-stream flows, enforcement of Laws such as the Endangered Species Act and the California Forest Practices Act, and Dam removal and modification.

This report focuses on the rivers and streams of Southern California (from the Santa Maria River in Santa Barbara County to the Santa Margarita River in San Diego County), and the endangered and threatened fish species these waterways support throughout their ancestral range. While reports of salmon in Southern California are anecdotal, we do have well documented runs of steelhead, an anadromous trout which is a member of the salmonid family. Southern California also supports several other species of unique native freshwater fish deserving protection.

In Southern California as a whole, biologists have historically identified 38 native freshwater taxa of fish, and 23 brackish or estuarine species which depend on low-salinity water for at least part of their life. (Swift, et.al., 1993) According to Camm Swift and his colleagues, "all of the native freshwater... species are extirpated or severely reduced in numbers within their native range." and some of the brackish or estuarine species are "also extinct or much reduced in range." (Swift, et.al., 1993) And most of the native species of the Colorado River drainages (of California) declined severely or were extirpated many years ago. (Swift, et.al., 1993)

There are also many non-native species of fish which have been introduced to Southern California, often with damaging results for native fauna. Swift, et.al. estimate roughly 100 non-native or introduced fish species in Southern California. The list breaks down as follows: white sturgeon, wakasagi, northern pike,

cutthroat trout, golden trout, silver or coho salmon, chinook salmon, kokanee salmon, brown trout, brook trout, american shad, threadfin shad, shortfinned eel, mexican tetra, goldfish, common carp, grass carp, lahontan tui chub, california roach, sacramento squawfish, hitch, blackfish, splittail, golden shiner, red shiner, fathead minnow, california sucker, bigmouth buffalo, channel catfish, oriental weatherfish, inland silverside, rainwater swordtail, southern platyfish, variable platyfish, striped bass, white bass, bigscale logperch, yellow perch, walleye, sacramento perch, largemouth bass, smallmouth bass, redeye bass, spotted bass, green sunfish, bluegill, pumpkinseed, redear, warmouth, white crappie, black crappie, orangemouth corvina, bairdella, yellofin goby, chameleon goby, blue tilapia, Mozambique tilapia, redbelly tilapia, tule perch, interior prickly sculpin. "About 25 additional freshwater fish have been placed in southern California waters, caught once, and never seen again. Additional species documented include 28 marine and freshwater fishes introduced into the Salton Sea, 16 freshwater fishes taken from bait dealers along the lower Colorado River, and aquarium species captured once near fish farms or in warm springs. These bring the total number of introductions to at least 100 and probably more for Southern California..." (Swift, et.al., 1993)

In an essay published before her death, Writer Elna Bakker identified 11 distinct bioregions in California.[1] (Bakker, E. 1994) The region covered in this report corresponds roughly to the South Coast bioregion, which includes all or most of Los Angeles and Orange Counties, the southern and eastern portions of Ventura County, the coastal half of San Diego County, and portions of Riverside and San Bernardino Counties (primarily in so far as the headwaters of coastal rivers occur in the mountainous areas of those counties). However, this report also includes rivers and streams found in northern Ventura County and Santa Barbara County.

1. The 11 bioregions identified were the North Coast/Klamath, Modoc, Sacramento Valley, Northern Sierra, Bay Area/Delta, Southern Sierra, San Joaquin Valley, South-Central Coast, Mojave Desert, South Coast, and Colorado Desert.

PART III. THE ENDANGERED AND THREATENED FISHES OF COASTAL SOUTHERN CALIFORNIA.

1. Overview:

Swift, et.al., list 38 taxa of freshwater fish which have been identified historically in Southern California. Of these, many have been extirpated. Table 1 lists only the nine freshwater fish that are identified as maintaining populations in the coastal drainages of Southern California south of Santa Barbara County, and ignores inland desert fishes. Of these nine fishes, additional information has been reported here on the Southern Steelhead, the Santa Ana sucker, and the tidewater goby.

Table 1: Status of Freshwater Fishes of Coastal Southern California

Fish	Status
Southern Steelhead and rainbow trout	Southern Steelhead and native rainbow trout comprise a single, interbreeding population. Native rainbow trout are not only the same taxon as southern steelhead, but are part of the same population in streams where they occur with steelhead. Historically, steelhead populations existed south to mid-Baja California. Today Steelhead have nearly the same distribution as the Pacific Lamprey in Southern California. South of Pt. Conception the following streams have records: Gaviota, Mission, and Atascadero Creeks, Ventura and Santa Clara Rivers, and Mulholland, Big Sycamore, Malibu and Topanga Canyon streams. Historically, fish also entered streams farther south, including Los Angeles, San Gabriel, Santa Margarita, San Luis Rey, San Diego and Tijuana Rivers, and San Onofre and San Mateo Creeks. Recently, steelhead have again been reported in San Mateo Creek.[a] It is listed as Endangered under the federal Endangered Species Act.
Pacific Lamprey	Still maintains runs in parts of the Santa Maria and Santa Ynez Rivers, parts of the Ventura River, the Sespe Creek portion of the Santa Clara River drainage, and the lower, unimpounded reach of Malibu Creek. Its habitat requirements are similar to those of steelhead.
Arroyo Chub	It is common at three localities within its native range, namely the Santa Margarita River and its tributary, De Luz Creek, in Trabuco Creek below O'Neill Park, in San Juan Creek and Malibu Creek. It is present but scarce in Big Tujunga Canyon, Pacoima Creek above Pacoima Reservoir, and in the Sepulveda Flood Control Basin, Los Angeles River drainage, upper San Gabriel River drainage, and middle Santa Ana River tributaries between Riverside and the Orange Co. line. Native populations have become reduced enough to deserve close monitoring to maintain or improve their status.
Santa Ana Speckled Dace	One of the rarest native freshwater fish in coastal Southern California. It is abundant only in the lower parts of the East, North, and West Forks of the San Gabriel River. Small populations existed in Fish Canyon (a small tributary of the San Gabriel River), and Lytle, Cajon, City, Strawberry, Mill, and Silverado Creeks, tributaries of the Santa Ana River system. Fish could not be found in 1990-1992 in Big Tujunga and Santiago Creeks despite thorough search.

Table 1: Status of Freshwater Fishes of Coastal Southern California

Santa Ana Sucker	Native populations still exist in the East, North, and West forks of the San Gabriel River, and in the lower Santa Ana River from about Mt. Roubidoux downstream to a few miles below Imperial Highway. In Southern California the Santa Ana sucker is distributed very much like the Santa Ana Speckled Dace, but in larger streams. It formerly was native in the uplands and lowlands of the Los Angeles Basin streams, now it is restricted to the uplands of the Los Angeles and San Gabriel systems, and conversely to the lowlands of the Santa Ana system. Fish became very rare in the Big Tujunga drainage in 1900-1992 and may soon be extirpated from the Los Angeles River drainage. Large introduced populations occur in the Santa Clara River. In the Sespe Creek area some hybridization with dusky suckers occurs. Genetic contamination does not extend to the isolated Soledad Canyon area upstream. This area is a possible refuge for Santa Ana suckers since it is becoming rare in its native range. It has been proposed for listing as threatened under the federal ESA.
Partially Armored Threespine Stickle-back	This subspecies appears to be widespread north of Point Conception, but to the south has been declining rapidly in recent years. Many local populations no longer exist, and it is possible many of these are gone permanently. The fish is found in the Ventura River, Santa Clara River, Calleguas Creek, San Juan Creek, San Mateo Creek, Santa Margarita River, San Luis Rey River, and four localities in northern Baja California. South of the Los Angeles Basin, the only recent records are from Trabuco Creek, in and below O'Neill Park, upper San Juan Creek near the mouths of Hot Spring and Cold Spring canyons; upper reaches of Bell Canyon on Starr Ranch (all in the San Juan Creek drainage); and from the South Fork of the San Jacinto River below Lake Hemet in San Diego County.
Unarmored Threespine Stickle-back	Originally widespread in the Los Angeles basin, but is now restricted to a 14 km stretch of the Soledad Canyon portion of the Upper Santa Clara River and upper San Francisquito Canyon. State and Federally endangered.
Tidewater goby	Found in the Ventura and Santa Clara Rivers, Malibu Creek (reestablished, 1991) San Onofre Creek, Las Pulgas Canyon, and Santa Margarita River. In Sept. 1992, a few were seen in Cockleburr Canyon, a site that lacked them on many previous visits since 1980. Only 14 localities exist south of Point Conception. Tidewater gobies have disappeared from many localities and rarely recolonize, and are a listed endangered species under the federal ESA.

a. See "Fish Find has Experts Jumping," *San Diego Tribune*, March 10, 1999.

2. Southern Steelhead (*Oncorhynchus mykiss irideus*):

Steelhead, members of the Salmonid family, are rainbow trout with a life cycle similar to that of a salmon. They are an anadromous species: born and reared in freshwater streams, as juveniles they migrate to estuaries, adjust to saltwater, and then migrate to the ocean to mature into adults. After spending one to three years foraging on the food sources of the Pacific, large adult steelhead, some reaching 20 pounds, they generally return to their home streams – some to the very pools of their birth – driven upstream by the instinct to reproduce. Unlike salmon, steelhead do not necessarily die after spawning and may make the spawning journey more than once. And, unlike juvenile salmon that typically migrate to the ocean after just a few months of freshwater rearing, juvenile steelhead reside in coastal streams from one to three years. As such, steelhead

use all segments of a river or stream system to complete the freshwater phase of their life-history: estuaries to acclimate to salinity changes, the middle reaches of the main stem to reach tributaries, and headwaters tributaries to spawn and rear. Steelhead require cool, clean water year-round to sustain themselves. (McEwan and Jackson. 1996, and California Trout, 1996) In addition, they need cool, clean well-oxygenated water flowing over clean gravel to breed and develop. Under natural conditions, these habitat requirements - especially suitable water temperatures - occurred primarily in the headwater tributaries, which is why adult steelhead migrate higher into a river system to spawn than do other anadromous fish species.

Interruption of the water regime through water extraction, introduction of silt from erosion due to road building or other hillside construction activities which destroy steelhead spawning beds and smothers developing eggs, and blockage of fish passage as a result of dams, have all contributed the decline of Southern California steelhead,. In addition, dams and water management activities often restrict steelhead spawning and rearing to lower elevation stream reaches where summer water temperature is often too high for juvenile rearing.

The southern steelhead has been chosen as the focus of our campaign to restore the river and stream ecosystems of Southern California. It is the most charismatic of our Southern California fish, because of its size, strength, and steel-blue coloring. It is especially valued by anglers for its beauty and speed. Most importantly, however, because the steelhead inhabits an entire river ecosystem, and requires clean, cool water year-round, it makes an excellent "indicator species" of the Southern California aquatic ecosystems (and related watersheds). If we have healthy runs of steelhead, we almost certainly have healthy rivers and streams.

However, the steelhead is also a hardy species. Their habitat once extended from Alaska down to northern Baja California. In California, most steelhead spawn from December through April, often making their way past normally dry sections of rivers, small streams, and tributaries during the winter rainstorms that increase in-stream flows. This ability to migrate, spawn, hatch, rear, and mature in subsequently hydrologically isolated and marginal aquatic environments until the next storm event re-establishes a migration corridor between the inland and marine environment makes the steelhead uniquely able to exist in the southern extent of their range.

The Santa Ynez River, near Solvang, was once considered to have the highest population of steelhead in Southern California. In fact, in 1944 the California Department of Fish and Game (DFG) found approximately 1 million juvenile steelhead trapped in a drying portion of the river. Today, the number of adult steelhead in the Santa Ynez is probably less than 100. Today the steelhead's range is sometimes thought to extend no farther south than Malibu Creek, where a silt-choked Rindge Dam blocks steelhead from migrating upstream. However,

recent discoveries of steelhead in San Mateo Creek, on the border of Orange and San Diego Counties, has confirmed the ability of the steelhead to repopulate areas of its historic range significantly south of Malibu Creek, where steam conditions improve either because of man-made habitat modifications, or as in the case of San Mateo Creek, because of natural habitat improvements such as increased rainfall and run-off.[1]

Unfortunately, if the steelhead is an excellent indicator species, like the proverbial canary-in-a-coal-mine, then it is telling us that our rivers and streams are in serious trouble. Statewide, steelhead populations have declined by over 90% since the 1950s and the Southern California population has declined by 99% since the turn of the century. In addition, they have been extirpated from at least 23 streams and their historic range has been significantly reduced. (Titus R.G. et al.,1994)

When Europeans came to California, the situation for the steelhead began to deteriorate. Impassable barriers like dams cut off the headwaters where steelhead like to spawn and rear their young. Gold-mining in the Central Valley watersheds, logging in the North Coasts forest, and agricultural and residential development in Southern California filled streams with sediments which destroyed steelhead spawning beds and smothered developing eggs. Pollution from municipal and industrial waste discharges robbed the fish of clean water. Coastal estuaries were drained or filled in, taking away important rearing habitat and the transition zone where steelhead make the physiological transition between salt and freshwater. According to the National Marine Fisheries Service (NMFS), twenty-three stocks of steelhead trout have become extinct this century, and another 43 (including the southern steelhead) face a moderate to high risk of extinction. The most pervasive reasons: habitat loss and degradation.[2]

Inaccessibility due to impassable barriers is the primary reason for the decline of southern steelhead. (Titus R.G. et al.,1994) Table 2 below is a listing of streams with barriers that block or impede access for steelhead.

1. The "reappearance" of steelhead in San Mateo Creek may be a repopulation but a lack of consistent monitoring may have overlooked or assumed the steelhead had vacated the stream.

2. Much of this information has been compiled from a Nov. 30, 1998 L.A. Times article, "Extinction of Special Fish May Hit a Snag," by Steve Hymon, and from the *Steelhead Restoration and Management Plan for California* by Dennis McEwan and Terry Jackson.

Table 2: Migration Barriers to Southern California Steelhead

County River/Stream	Dam/Barrier	County
Santa Ynez	Bradbury Dam	Santa Barbara
Santa Ynez Barbara	Gibraltar Dam	Santa Barbara
Santa Ynez Barbara	Juncal Dam	Santa Barbara
Gaviota Creek	Road stabilization structures	Santa Barbara
Mission and San Jose creeks	Debris dams and impassable flood control channels	Santa Barbara
Gaviota Creek south to Ventura River	Numerous Hwy 101 culverts	Santa Barbara & Ventura
Santa Paula Creek	Harvey Dam	Ventura
Ventura River	Casitas Dam	Ventura
Ventura River	Robles Dam	Ventura
Ventura River	Matilija Dam	Ventura
Santa Clara River	Santa Felcia Dam	Ventura
Santa Clara River	Vern Freeman Diversion	Ventura
Calleguas Creek	Road stabilization structures	Ventura
Malibu Creek	Rindge Dam	Los Angeles
Arroyo Sequit Creek	Un-named dam	Los Angeles
Arroyo Sequit Creek south to Topanga Creek	Numerous Hwy 101 culverts	Los Angeles
San Juan Creek	Road crossings	Orange
Santa Margarita River	Road crossings	San Diego
Sweetwater, Palo Verde and Loveland dams	Sweetwater River	San Diego
Otay River	Upper & Lower Otay dams	San Diego
San Diego River	San Vicente, El Capitan, Helix and Cuyamaca dams	San Diego
Pauma Creek	Road Crossing	San Diego
San Luis Rey River	Henshaw Dam	San Diego
San Dieguito River	Sutherland and Hodges dams	San Diego
San Mateo Creek	Road Crossing	San Diego
Tijuana River	Moreno and Barrett dams	San Diego

In several Southern California streams such as Matilija Creek and the Santa Ynez River, in Santa Barbara and Ventura counties, wild rainbow trout are stranded upstream behind the silted-up Matilija Dam, or above the series of Santa Ynez River dams. Geneticists tell us that these fish are indistinguishable

from steelhead found below the dams. (Nielsen, Jennifer L. et al. 1994, and Nielsen, Jennifer L. 1996)

Because of its hardiness, and its ability to re-colonize, the reservoir of fish in the marine environment, many biologists and ecologists express a guarded optimism that the southern steelhead will not be lost. The 1999 return of steelhead to San Mateo Creek and the Santa Ynez River provides evidence that they will return, if habitat conditions are restored. These distinct steelhead have survived this long, they note, and there is still good spawning and rearing habitat left in Southern California watersheds, particularly in the relatively protected Los Padres, Angeles and Cleveland National Forests. "Those fish went to places you would never believe there were fish," said Forest Service biologist Sara Chubb. "There seems to be something inherently bred in their genetics that makes them want to go further, to keep repopulating." [1]

The problem, however, is that steelhead often cannot get to the habitat. As an example, Solstice Creek is a small perennial stream on National Park Service land flowing from the Santa Monica Mountains to Malibu. However, a culvert under Pacific Coast Highway prevents steelhead from reaching it. In Matilija Creek, in Ventura County, wild rainbow trout are stuck upstream behind the silted-up Matilija Dam. What would happen if their path were again clear? After 50 years, would they show anadromy and run to the sea? Sespe Creek, north of Fillmore in Ventura County, is the last major free-flowing stream in Southern California. Steelhead once migrated 80 miles up the Santa Clara River and Sespe Creek system. Today, most of the creek lies within a federally protected Wilderness and Wild and Scenic River area. However, fish have difficulty reaching the Sespe because it drains into the Santa Clara River, which suffers from dewatering, waste discharges, fish passage impediments, and historic gravel mining operations.

These are only three instances among many in Southern California where access has been denied to historically important steelhead spawning and rearing areas in headwater areas. Still, there is good reason to believe that if we take action to remove dams, check water pollution, and rectify land use abuses in watersheds, the steelhead will return to their historic spawning grounds.

1. Quoted in 11/30/98 *Los Angeles Times* story, "Extinction of Special Fish May Hit a Snag," by Steve Hymon.

3. The Santa Ana Sucker: (*Catostomus Santaanae*):

The Santa Ana sucker has large thick lips and a small mouth used to "vacuum" algae and invertebrates from stream beds. It is about 6 inches long and has a dark, blotchy back and silvery underside. The Santa Ana sucker inhabits small, shallow streams and is most abundant where the water is cool, clean and clear."[1]

On January 26, 1999 the U.S. Fish and Wildlife Service proposed the Santa Ana sucker for threatened status under the federal ESA. The petition to list the sucker was filed by the Earth Justice Legal Defense Fund on behalf of a coalition of groups. The fish has a historic range that roughly corresponds to the Los Angeles metropolitan area, but has been extirpated from 75% of its historic range.

Common as recently as the 1970s, the Santa Ana sucker is now found in only four Southern California locations. According to the US Fish and Wildlife Service, small isolated populations of the sucker occur in the San Gabriel River, the Santa Ana River, and the Big Tujunga Creek. An introduced population also occurs in the Santa Clara River drainage system in Ventura and Los Angeles counties. All four rivers have dams that isolate and fragment the remaining populations, and "likely have resulted in some populations being excluded from suitable spawning and rearing tributaries."[2]

Much of the remaining range of the Santa Ana sucker is imminently threatened by urban encroachment, introduction of exotic predators and competitors, degraded water quality, other anthropogenic factors (e.g. human recreation, dam operations), and/or small populations and associated genetic concerns.[3]

A U.S. Fish & Wildlife press release also identifies water diversions, channelization, and concrete lining of streams, as well as erosion, debris torrents, and pollution as causes degrading or destroying Santa Ana sucker habitat. "Because the species is very fertile and tolerates a broad range of habitats, its decline indicates the severity of the impacts."[4]

Further, according to the Fish and Wildlife Service proposed listing rule, the Seven Oaks Dam, "now under construction upstream from the present range of the Santa Ana sucker, in the Santa Ana River, will prevent further upstream movement of the fish and further isolate the Santa Ana sucker populations from

1. From U.S. Fish and Wildlife Service Fact Sheet issued to accompany announcement of proposed ESA listing of Santa Ana Sucker as threatened.
2. From rule proposing threatened status for Santa Ana Sucker, *Federal Register*, Vol. 64, No. 16, p. 3917.
3. From U.S. Fish & Wildlife Service Fact Sheet issued to accompany announcement of proposed ESA listing of sucker as threatened.
4. News Release 99-02, dated January 26, 1999, quoting Fish & Wildlife Service Pacific Regional Director Anne Badgley.

their native range in the headwaters of the system." The Center for Biological Diversity has filed a lawsuit against the Army Corps of Engineers over the impacts of the nearly completed Seven Oaks Dam on endangered species in the Santa Ana River.

4. Tidewater Goby: (*Eucyclogobius newberryi*)

The tidewater goby is a small grey-brown fish with dusky fins, found in the brackish waters of California's coastal estuaries, wetlands and lagoons. The tidewater goby is the only known species in its genus, Eucyclogobious, and is endemic to California. The goby is a short-lived species, with a majority of individual completing their life cycle within one year. Successful recruitment is dependent on an adequate amount of spawning habitat and a suitable salinity regime during the reproductive and rearing period. Spawning is most common from spring to mid-summer when most California estuaries are naturally closed to the ocean and exhibit low-salinity brackish water conditions. The tidewater goby spend its entire life-cycle within the estuary, though there are records of fish moving sever miles upstream in some low gradient streams.

Historically, tidewater gobies could be found from the mouth of the Smith River, Del Norte County, near the Oregon Boarder, to as far south as San Diego County. Tidewater gobies are uniquely adapted to coastal lagoons and to the uppermost brackish zones of larger estuaries and are entirely dependent upon these habitats for their survival. Populations of tidewater gobies have suffered decline mirroring the degradation of California's coastal wetlands. It has been estimated that approximately 75-90% of the original estuarine wetland acreage of California has been lost since 1850. Of the 110 sites from which tidewater gobies shave bee historically reported, many no longer support tidewater goby populations. In response to this population decline, the tidewater goby was listed as an endangered species in 1994. Some of the factors most responsible for the decline in tidewater goby populations are the encroachment of development, channelization of coastal streams, diversion of surface flows, groundwater extraction, importation of point and non-point sources of pollution (including sedimentation), and the introduction of exotic species of plants and fishes. Remaining habitat is threatened by a wide variety of on-going habitat modifications, including artificial breaching of sand and cobble berms which seasonally form at the mouth of most estuaries and create the necessary brackish water conditions. Artificial breaching, particularly during the spring and summer, and fall months, causes rapid fluctuations in water salinity levels, as well as in the amount of suitable habitats.

The classification of tidewater goby as a federally endangered species has focused attention on California estuaries, particularly often overlooking small estuaries at the mouths of coastal streams.[1] As one of the few species in California that is restricted to low salinity brackish water habitat, the tidewater goby indicator species component of the estuarine community. The tidewater goby's

decline can be an important indication of the general and ecological functioning of California remaining estuaries.

5. Unarmored and Partially Armored Three Spine Stickleback: (*Casterosteus spp.*)

The three spine stickleback is a small freshwater fish which was once widely distributed throughout Southern California. Because it has occupied a variety of habitats, it has diversified into a number of distinct sub-species, and sub-populations. The partially armored three spine stickleback is widespread north of Point Conception, but the south has been declining rapidly due to habitat degradation and loss, and the introduction of introduced predatory exotic species as well as inter-breeding with introduced populations from different drainages.

The unarmored three spine stickleback was original widespread and abundant in the Los Angels Basin. Currently, it is restricted to a 12 mile section of Soledad Canyon of the Upper Santa Clara River (Ventura County) and upper San Francisquito Canyon (Los Angeles County). There is also an isolated, introduced populations outside of the historic range in San Felipe Creek in San Diego County. The unarmored stickleback has been subjected to the same threats as the partially armored sub-species, and illustrates the vulnerability of the native fish fauna of Southern California.

The recovery of three spine unarmored stickleback (listed as endangered under state and federal Endangered Species Acts) has focused primarily on protecting the existing population in Soledad Canyon, and again illustrates the need for more pro-active, aggressive recovery efforts for the endangered fish fauna of Southern California.

PART IV. Problems Affecting Southern Steelhead and the Environment

1. Fish Passage Impeded by Barriers

In 1996 the California Department of Fish and Game produced an excellent summary of both the status of, as well as the challenges facing steelhead restoration through the state. The DFG's *Steelhead Restoration and Management Plan for California* (Plan) emphasizes the urgency and priority the state should direct towards southern steelhead: (McEwan and Jackson. 1996)

1. Unfortunately, in 1999 the United States Department of Interior announced its intention to remove the tidewater goby from the endangered species list. Available scientific evidence clearly indicates that the tidewater goby still remains vulnerable to extinction and that delisting the species is premature.

> *"Southern steelhead stocks are the most jeopardized of all of California's steelhead populations; numbers have declined drastically in nearly all southern streams."* (McEwan and Jackson. 1996) (emphasis added)

> *"South coast management focus will be on recovering these stocks from impending extinction and this will be the highest priority for DFG steelhead management."* (McEwan and Jackson. 1996) (emphasis added)

Both the DFG and experts have determined that the single greatest limiting factor holding hostage the recovery of southern steelhead is the network of regional dams and other fish passage barriers. According to Dr. Robert Titus,

> *"...the results reflect the fact that steelhead are no longer able to reach important upstream reproduction and nursery areas in most of the major coastal drainages south of the San Francisco Bay (e.g. the Salinas, Carmel, Santa Maria, Santa Ynez, Ventura, Santa Clara, Los Angeles, San Gabriel, Santa Ana, San Diego, and Tijuana river drainages, among others)."* (Titus R.G. et al, 1994)

The DFG's Plan lists the major steelhead passage problems which must be overcome to recover Southern California steelhead. For example, the vast majority of ancestral spawning and rearing habitat on the Ventura River exists above two dams, the Robles Diversion and Matilija Dam. Before these were built in 1959 and 1948 respectively, 2,500 adult steelhead were thought to be produced by the excellent aquatic ecosystems of the Ventura River and its prime tributary, Matilija Creek. (Casitas Municipal Water District, et al. 1998)

Table 3: Southern California Steelhead Passage Issues (McEwan and Jackson 1996)

Watershed	Project	Plan Page
Santa Ynez River	Fish passage at Bradbury Dam	197
Ventura River	Fishway at Robles Diversion	203
Ventura River	Fishway or dismantle Matilija Dam	204
Malibu Creek	Dismantle Rindge Dam	209
Santa Barbara Coast	Fish passage at PCH and Rincon Creek	200
Santa Barbara Coast	Fish passage at Gaviota Creek	200

2. Agency Planning and Staffing

Until the listing of southern steelhead as endangered under the ESA, little attention (including staffing and capital improvement restoration projects) was given to the Southern California region. As a result, there is a notable shortage of biologist with anadromous fish training or experience to address the myriad instances of illegal take of fish, as well as loss or degradation of habitat. The DFG Restoration and Management Plan identified a number of restoration and management actions, but does not identify staffing or funding level to accom-

plish these actions. (See additional discussion below) It is therefore imperative that the Department prepare a staffing/organizational chart, and create a report of annual implementation costs to address many of the other actions detailed in the plan. Given the DFG's current limited staff resources on the South Coast developing a comprehensive set of strategies and strategic staffing position may not be possible at this juncture.

To avoid lost time, we would request the Department develop cost estimates for the following management actions, including staffing and operational/support:

Table 4: DFG Management Actions (McEwan and Jackson. 1996)

Watershed	Project	Plan Page
South of Los Angeles	Habitat assessment on waters south of LA[a]	210
South of Los Angeles	Restoration potential waters south of LA	210
Malibu Creek	Available habitat	209
Santa Clara River	Santa Paula Creek habitat assessment	206
Santa Clara River	Vern Freeman monitoring to verify facility	206
Ventura River	Habitat assessment for Coyote & San Antonio Creeks	204
Santa Barbara Coast	Assess PCH stream crossing for fish passage	201
Santa Ynez River	Seek water releases from Bradbury Dam	197

a. Habitat assessment would also include instream flow assessments on all southern rivers subject to licensed water diversions.

While estimating these project costs is the initial step in the implementation process, a number of projects and issues await more direct DFG attention.

Santa Barbara County

A. Upcoming water rights hearing on the Santa Ynez River

DFG is currently involved with cooperative studies, but at a low level and no personnel are dedicated full time to this important issue.

B. Fish passage in Gaviota Creek

Some preliminary work to modify road stabilization structures has been done, but the project is currently dead. No DFG personnel are currently working on this.

C. Fish passage on Mission Creek

Project needs to be initiated, currently no DFG personnel are involved.

Ventura County

A. Robles Diversion Dam Fish Ladder and Fish Screens Project

Project is currently underway. DFG personnel from Sacramento are working on this as they have time, as is the local biologist, along with their many other duties. No DFG personnel are dedicated to this full-time.

B. Matilija Dam removal

DFG is currently involved, but at a very low level and no personnel are dedicated full time. The project suffers from lack of involvement by DFG.

C. Instream flow study of theVentura River

D. Project needs to be initiated, currently no DFG personnel are involved.

E. Vern Freeman fish ladder assessment

F. It is unknown whether this multi-million dollar fish ladder, which is located downstream of all steelhead habitat in this system, is able to pass adult steelhead. No DFG personnel are currently involved in this and the project needs to be initiated.

G. Harvey Dam fish Ladder (underway)

DFG engineers and local biologist are adequately involved in this.

Los Angeles County

A. Fish passage on Arroyo Sequit and other Santa Monica Mountains streams

Project needs to be initiated, currently no DFG personnel are involved.

B. Rindge Dam removal

DFG was involved in this, but currently no staff is working on this. Project is apparently stalled due to lack of involvement by affected agencies. Project needs to be re-initiated, currently no DFG personnel are involved.

Orange County

A. Fish passage evaluation on San Juan Creek

Project needs to be initiated, currently no DFG personnel are involved.

B. The six foot vertical drop on the concrete bridge abutment on Trabuco Creek, where it passes under I-5.

Project needs to be initiated, currently no DFG personnel are involved

San Diego County

A. Habitat assessment and fish population monitoring on San Mateo Creek

This project has taken on much importance with the discovery of steelhead in San Mateo Creek this year. However, monitoring by the DFG local biologist, who has many other duties, is opportunistic and non-intensive. A study plan needs to be developed and a more standardized and intensive monitoring protocol needs to be implemented. This would probably occupy a single biologist at least half-time.

B. Fish passage evaluation on the Santa Margarita River

Project needs to be initiated, currently no DFG personnel are involved

Regional

A. Fish population monitoring on coastal streams south of the L.A. basin.

Project needs to be initiated, currently no DFG personnel are involved. Southern extent of steelhead populations is often reported as Malibu Creek. However, no population monitoring is currently taking place anywhere south of Malibu Creek, with the exception of a low-level effort in San Mateo Creek, so steelhead usage of these streams is unknown. Given that this is an important ESA issue, intensive monitoring of these streams needs to be initiated.

B. Assessment/feasibility of captive breeding/rearing on the Ventura River, Santa Paula Creek, and other southern California streams.

Project needs to be initiated, currently no DFG personnel are involved. With the implementation and completion of several fish ladder projects, it is possible that captive breeding/rearing may need to be implemented to reestablish steelhead populations in newly accessible habitat. DFG needs to begin an assessment of this and a feasibility/cost analysis if captive breeding/rearing is deemed appropriate. This would probably occupy a single biologist at least half-time.

C. Upcoming Federal Energy Regulatory Commission relicensing issues

DFG personnel are involved on a case-by-case basis, however, no one is dedicated full-time to this for Southern California.

The DFG is involved in several southern steelhead issues, but with the exception of one or two issues, not at the level that they need to be. DFG staff working on these issues are located in Sacramento or are Regional biologists that have many other duties besides southern steelhead restoration and protection. The sheer magnitude of the tasks described in the above table requires that DFG dedicate at least two biologists to work full time on southern steelhead issues. Given their public trust mandate, DFG should be the lead agency on all of these issues.

In addition to the DFG, NMFS should be much more involved in biological studies and monitoring, given their ESA responsibilities. Currently, NMFS staff in Long Beach have been focused almost exclusively on permitting issues, and virtually nothing has been done for protection, recovery, or research. NMFS should involve their fishery scientists located at the Southwest Region Fisheries Science Center in Tiburon, California in monitoring and research on southern steelhead. We believe that their efforts and scientific expertise, working cooperatively with the DFG, would greatly assist in providing baseline biological

information and answering some of the more pertinent questions about the status of the populations.

To strengthen relationships with the public, we encourage the DFG (and other agencies) to seek public/private partnerships as a means to maximize public trust benefits, including efforts for improved public access to local waters for monitoring purposes.

3. Political Indifference

There is a growing public concern over the health of California's salmon and steelhead populations. Yet a review of the current political landscape -- and actions -- to recover Southern California steelhead cause us concern.

- No new state steelhead biologists have been hired for the Southern California region even though the California Department of Fish and Game has declared the Southern California steelhead the most important population to restore.
- No Southern California steelhead advocate has been appointed to serve on the California Advisory Committee on Salmon and Steelhead Trout, which advised the DFG Director and the Legislature on steelhead recovery needs, priorities and programs.
- No Southern California legislative official advocating steelhead recovery is appointed to the Joint Committee on Fisheries and Aquaculture, which plays a crucial role in insure proper funding, policy, and program implementation occurs in the annual state budgeting cycle.
- Of the $37 million dedicated by the DFG to salmon and steelhead restoration, less then $1 million (2.5%) has been spent in Southern California.
- $43 Million in state salmon and steelhead funds are largely being directed toward Northern California salmon and steelhead recovery, with little being spent in Southern California for this purpose.
- Of the $6.7 million in federal money budgeted for steelhead and salmon programs in California, the national Marine Fisheries Service has dedicated less the 4 percent for southern steelhead.
- $20 Million in the federal "Pacific Coast Salmon Recovery" funds are being divided by state legislation, but as much as 90% of these funds will be used in Northern California.
- No coordinated efforts to elevate public awareness or to create a centralized information sharing system has been created by government, organizations or individuals.
- The Resources Agency has announced a new major program to create a coastal anadromous restoration program, but all meetings to date have occurred in Northern California.
- No legislation is proposed to resolve these inequities.

- No regional system has been established by like-minded groups or individuals concerned about the fate of steelhead to share information, expertise, talent, joint litigation or political support.
- No collective efforts have been organized to seek individual project funding support for grassroots efforts, group coordination, research, coalition building or any other mutually beneficial efforts.

4. Inadequate Administration Of the Esa Protective Measures

The listing of the southern steelhead as an endangered species under the federal Endangered Species Act was only the first step along the way to the ultimate goal of delisting. The listing also call for the identification of "critical habitat" necessary for the recovery of the species, and the development of a recovery plan to guide recovery actions. To date, the National Marine Fisheries Services has done neither.

Currently, ESA protections only extend south to Malibu Creek, despite documentation of steelhead adults and juvenile steelhead in streams south of Malibu Creek, such as in Topanga and San Mateo Creeks. Due to water diversions, barriers, and urbanization, these fish are even more endangered than those north of Malibu Creek. We are committed to seeing that NMFS acts responsibly in their promulgation of the ESA to protect these populations throughout their historical range.

While a rule for designating critical habitat has been proposed and has be circulated for comment, no decision has yet been made on the adoption of a final rule. Further, the proposed rule excludes virtually all of the original historical spawning and rearing grounds above existing fish passage barriers, and therefore ignores the single most important cause of the decline of steelhead in Southern California. Neither has the National Marine Fisheries Service initiated the development of a recovery planning process to guide recovery efforts.

Additionally, the southern boundary of the Southern California Evolutionarily Significant Unit (ESU) has been arbitrary and artificially limited to the Malibu Creek drainage, despite historic records of steelhead distribution south of Malibu, and the recently documented presence of juvenile steelhead in San Mateo Creek (San Diego County).

The Southern California Steelhead Recovery Coalition believes it is prudent to assign a high priority to recovery efforts on southern steelhead. For one thing, the vast majority of the state's populous reside in this region. Finalization of the critical habitat rule (including extension of the critical habitat to include prime spawning and rearing habitats above existing impassable barriers), extension of the southern ESU boundary to include coastal watersheds and streams south through San Diego County, and the active development recovery plans will be essential to the restoration of steelhead in Southern California.

PART V. RECOMMENDATIONS FOR RIVER & STREAM RESTORATION & STEELHEAD RECOVERY

The Southern California Steelhead Recovery Coalition recognizes the importance of the state and federal recovery efforts in other regions of California. Accordingly, we are calling for development of a "new and improved" mission for the Department of Fish and Game, the National Marine Fisheries Service, and government in general, to expand their present role to encompass new vision consistent with biological reality which meets the needs of the whole state in the 21st century.

Fortunately for Steelhead, California has passed its assessment phase. From a state government perspective, the February 1996 authorization of the *Steelhead Restoration and Management Plan for California* has provided leadership to move the focus from assessment to planning and implementation. From a federal perspective, the August 1997 listing of Southern California steelhead, under the Endangered Species Act, means a shift from diagnosis to restoration actions. We are certain government's role as trustee should not be diluted by engaging in more assessment, but meaningful recovery efforts instead. Such an aggressive approach will not only focus state and federal agencies in California, but advance ecologically and economically important steelhead biodiversity of the state.

On this basis, the Southern California Steelhead Recovery Coalition proposes the following ten-point plan of action:

1. A representative of the Southern California Steelhead Recovery Coalition should be immediately granted a position on the California Advisory Committee on Salmon and Steelhead Trout.
2. The Joint Committee on Fisheries and Aquaculture should include a member familiar with and committed to the needs of Southern California steelhead recovery.
3. The Secretary of Resources should act immediately to include Southern California in the agency's new major effort to create a coastal anadromous restoration program.
4. The DFG should initiate a budget change proposal to hire two biologists in Southern California who will be dedicated to the recovery of the region's steelhead.
5. The National Marine Fisheries Service and the California Department of Fish and Game should jointly produce a prioritized and coordinated Southern California steelhead recovery program. Both agencies should be committed to fund the recommendations of this program. In addition, NMFS should involve their Southwest Science Center scientific staff in working cooperatively with the DFG on monitoring, research, and recovery planning.

6. Effort to increase steelhead passage above existing dams needs urgent attention. Both Matilija and Rindge dams should be acknowledged for what they are -- public nuisances -- and dismantled.
7. The National Marine Fisheries Service must shift its efforts from reactionary to proactive. The agency should simultaneously reconsider its initial critical habitat decision neglecting historic spawning and rearing habitat above dams and barriers throughout Southern California and it should take immediate action to expand the boundaries of Southern California steelhead to include San Mateo Creek and other southerly coastal waters.
8. The National Marine Fisheries Service should take appropriate action to provide ESA protection for all native rainbow trout in anadromous waters.
9. The Southern California Steelhead Recovery Coalition should continue to emerge as a regional body advocating recovery.
10. Public awareness and education should become an important function of the Southern California Steelhead Recovery Coalition. Every effort should be made to initiate a speaker's bureau, Web page and other means of disseminating information to the public, government and media.

Selected References

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EXHIBIT 14

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Impacts of New Highways and Subsequent Landscape Urbanization on Stream Habitat and Biota

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New highways are pervasive, pernicious threats to stream ecosystems because of their short- and long-term physical, chemical, and biological impacts. Unfortunately, standard environmental impact statements (EISs) and environmental assessments (EAs) focus narrowly on the initial direct impacts of construction and ignore other long-term indirect impacts. More thorough consideration of highway impacts, and, ultimately, better land use decisions may be facilitated by conceptualizing highway development in three stages: initial highway construction, highway presence, and eventual landscape urbanization. Highway construction is characterized by localized physical disturbances, which generally subside through time. In contrast, highway presence and landscape urbanization are characterized by physical and chemical impacts that are temporally persistent. Although the impacts of highway presence and landscape urbanization are of similar natures, the impacts are of a greater magnitude and more widespread in the urbanization phase. Our review reveals that the landscape urbanization stage is clearly the greatest threat to stream habitat and biota, as stream ecosystems are sensitive to even low levels (<10%) of watershed urban development. Although highway construction is ongoing, pervasive, and has severe biological consequences, we found few published investigations of its impacts on streams. Researchers know little about the occurrence, loading rates, and biotic responses to specific contaminants in highway runoff. Also needed is a detailed understanding of how highway crossings, especially culverts, affect fish populations via constraints on movement and how highway networks alter natural regimes (e.g., streamflow, temperature). Urbanization research topics that may yield especially useful results include a) the relative importance and biological effects of specific components of urban development—e.g., commercial or residential; b) the scenarios under which impacts are reversible; and c) the efficacy of mitigation measures—e.g., stormwater retention or treatment and forested buffers.

Keywords road, urbanization, motorway, macroinvertebrate, fish, urban

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Introduction

Due to their large surface area, high traffic volume, and potential to induce urban development, the construction of large (≥ four-lane) paved roads (herein defined as highways), are often detrimental to local ecosystems. Stream ecosystems are particularly sensitive to the construction of new highways due to characteristics of the fluvial environment and biota. Downstream transport of water and sediment spreads chemical and fine sediment pollution, causing the ecological impacts of highways to extend farther in aquatic than in terrestrial environments (Forman and Alexander, 1998). Aquatic fauna often have a more difficult time avoiding spreading impacts than terrestrial fauna because their movements are generally confined to the narrow linear geometry of the stream channel. In addition, highways and urban development alter the hydraulic connection of streams to their watersheds, fundamentally altering processes, which control channel geomorphology, form habitat, and ultimately contribute to biotic integrity (Wang et al., 2001; 2003).

Angermeier et al. (2004) conceptualized the extent and nature of highway impacts on streams in three consecutive stages: initial highway construction, highway presence, and eventual landscape urbanization (Table 1). Because this framework reflects the spatial and temporal dimensions of impacts, it is useful for organizing, describing, and evaluating the environmental concerns of new highways. The initial phase, highway construction, includes all the short-term impacts from the construction process. These impacts are generally physical, temporary (i.e., subside through time), and local. The second phase, highway presence, encompasses secondary impacts that are chronically generated from the physical presence of the highway including chemical pollutants from automobile traffic and stream channel alterations. These chemical and physical impacts are regional and occur as long as the highway exists. Finally, landscape urbanization includes the impacts from general economic development and results in a variety of chemical and physical impacts that are widespread and chronic. Previous reviews have focused on single phases of highway impacts (Atkinson and Cairns, 1992; Little and Mayer, 1993; Forman and Alexander, 1998; Trombulak and Frissell, 2000; Forman and Deblinger, 2000; Paul and Meyer, 2001) but not clearly described or considered the inherent connectivity of the nature and scales of the impacts.

Table 1

Conceptual framework for primary physico-chemical impacts of highway construction. The scale and nature of primary environmental impacts change from the direct effects of highway construction to the secondary and indirect effects associated with the presence of a highway and urban development. These may be viewed as a gradient of changing concerns and impacts through time. All physico-chemical impacts have important consequences for stream biota but the degree of peer-reviewed investigation differs among stages

	Developmental stage		
Impact characteristics	Highway construction	Highway presence	Urbanization
Temporal extent	Temporary	Chronic	Chronic
Spatial extent	Local	Regional	Regional
Primary nature	Physical	Physical and chemical	Physical and chemical
Degree of investigation	Low	Moderate	High

The predictable effects of the three consecutive stages of new highway construction are seldom considered simultaneously in environmental assessments. The National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ), and various state environmental laws (CEQ, 1997) require state and federal transportation agencies to consider the significance of anticipated impacts in environmental assessments (EAs) or prepare environmental impact statements (EISs) when significant impacts are anticipated. However, these assessments generally focus almost exclusively on short-term, localized impacts and ignore the long-term secondary and cumulative impacts (Spaling and Smit, 1993; McCold and Holman, 1995; Burris and Canter, 1997; Cooper and Canter, 1997; Angermeier et al., 2004) that are often primary concerns of the government agencies and civilian stakeholders reviewing these documents (e.g., NCWRC and NCDPR, 2002). Although European countries more rigorously apply ecological principles to transportation projects than the United States (Forman and Alexander, 1998), inadequate assessment of cumulative effects is a global problem (Cooper and Sheate, 2002).

Evaluations of the thoroughness of EISs and EAs are often limited due to a lack of published summaries of the impacts that may be expected from proposed projects. For example, evaluations of EISs and EAs have searched for the assessments for key words or concepts rather than assessing how meaningful and thoroughly probable impacts were considered (e.g., Burris and Canter, 1997; Cooper and Canter, 1997). A new review of the extent and nature of impacts from new highways that considers the stages and changing impacts identified by Angermeier et al. (2004) will assist reviewers of EISs and EAs in explicitly linking the successive stages, a step often ignored in assessment-proposed highway projects. Our review summarizes investigations that will help environmental and fisheries scientists consider potential impacts of proposed highway projects over multiple dimensions, but are often unavailable in field offices, and spread widely across academic disciplines. In addition EISs, EAs, and previous reviews often make assertions based on unpublished government reports which suffer the general inadequacies of "grey" literature (Collette, 1990). In contrast, we rely almost exclusively on published, peer-reviewed studies.

The purpose of this article is to review the impacts of new highways through undeveloped land. Although not the focus of this review, much of the information presented may be relevant to more common highway improvements, such as lane additions and surface upgrades. We focus on studies conducted in the United States, but some relevant international research is included to supplement sparsely researched topics. Following our conceptual framework (Table 1), we synthesize the scientific knowledge on physical, chemical, and biological responses of streams during 1) highway construction, 2) highway presence, and 3) watershed urbanization. The ultimate goals of this review are to provide information that will: 1) improve the ability of transportation planners to prepare more through, meaningful, and science-based EISs and EAs, and 2) spur research in subject areas where rigorous studies are lacking but information is needed for comprehensive impact assessment of new highways.

Highway Construction

Highway construction can be highly destructive to stream habitat and biota. Impacts on streams are primarily acute, local, and physical in nature (Table 1). Highway construction primarily degrades stream habitat locally but some of these impacts may transport downstream. In contrast to impacts of highway presence and landscape urbanization, many construction impacts may be temporary and streams can recover if not recurrently disturbed. In this section, we review literature assessing these acute impacts (e.g., sedimentation). Other

impacts initiated during construction but posing long-term threats, such as channelization and culverts, are considered in the Highway Presence section.

Highway Construction and Physical Habitat

As with any earth-moving activity, the greatest threat of highway construction to streams is fine sediment pollution, which can cause a variety of problems for resident biota, including direct mortality, reduced reproductive success, and a reduction in the food base (reviewed in Waters, 1995). Fine sediment pollution originates as bare soil erodes into streams, usually after exposure to precipitation or flowing water. Streams impacted by highway construction accumulate (Clarke and Scruton, 1997) and transport (Weber and Reed, 1976) many times more sediment than undisturbed streams. Although a variety of erosion control procedures are available and often legally required, they are seldom evaluated for their effectiveness (but see Grace (1999), Benik et al. (2003a, 2003b)) and have a risk of failure seldom considered in published investigations or environmental impact statements. A Pennsylvania study found that, even in the presence of sediment control techniques, streams impacted by highway construction carried 5 to 12 times more fine sediment than a control stream (Weber and Reed, 1976). The suspended solids load of a Ontario stream increased from an average of 2.8 mg/l to 352.0 mg/l during the initial "clearing phase" and peaked at 1,390 mg/l during highway construction (Barton, 1977). In addition, Barton (1977) observed a 10-fold increase in fine sediment deposition following a highway construction channelization project but stream sediment loads approached preconstruction levels near the completion of the construction. Increases in suspended sediment are detectable for long distances (kms) downstream of construction sites (Wellman et al., 2000). These sediments deposit in downstream pools, riffles, and impoundments (Duck, 1985; Brookes, 1986).

Highway construction can result in a variety of other seldom studied physical habitat degradations by encroaching onto floodplains and damaging riparian areas. Heavy equipment accessing the stream may incidentally damage (Hubbard et al., 1993) or purposely remove (Stout and Coburn, 1989) riparian vegetation during highway construction. Riparian vegetation is a critical component of stream watersheds and performs many important functions for streams (see Urbanization section). Streams near highways are often channelized and the initial effect of heavy equipment modifying the stream channel may alter the dynamic equilibrium of streams and result in rapid channel reorganization, all of which can lead to additional sedimentation and erosion downstream.

Highway Construction and Stream Chemistry

We found no studies documenting chemical impacts of highway construction on streams. However, the use of heavy machinery in and around streams likely causes some chemical pollution. In addition, many highway construction materials are highly toxic to aquatic biota. For example, industrial waste materials and byproducts such as shredded tires, ashes, mining wastes, municipal sludge, and wood wastes may be used in highway construction (Eldin, 2002). These materials release heavy metals and hydrocarbons which are toxic to water fleas *Daphnia magna* and algae *Selenastrum capricornutum* (Eldin, 2002). The toxicity of these materials may be reduced when in contact with soil, and during typical construction these toxins are unlikely to reach detrimental levels in streams. Nevertheless, the proximity of toxic materials to streams increases the chances of accidental spills and releases.

Biological Effects of Highway Construction

The impact of highway construction on stream fishes and macroinvertebrates is rarely studied. Similar to other anthropogenic landscape changes, highway construction is difficult to research for several reasons. Highway construction consists of many individual impacts that occur concurrently; thus, specific causal mechanisms are difficult to establish. An additional obstacle to research is that construction timeframes are often unpredictable, and construction often takes longer than the tenure of a typical graduate student. In addition, highway construction presents statistical and study design difficulties; for example, treatments are difficult to replicate and meaningful controls difficult to establish.

We found only a few studies investigating the effects of highway construction on stream fishes and macroinvertebrates. However, fine sediment pollution occurs from a variety of anthropogenic sources and is widely studied outside the context of highway construction. The effect of fine sediments on stream biota has been recognized for decades (Ellis, 1936) and is the subject of many previous reviews (Chutter, 1969; Bruton, 1985; Ryan, 1991; Waters 1995; Wood and Armitage, 1997; Henley et al., 2000). Therefore, in addition to studies that directly focus on highway construction, this section includes more general investigations of the effect of fine sediment on stream biota.

Fine sediment pollution from highway construction can immediately alter macroinvertebrate and fish communities (Barton, 1977). Reductions in the abundance and diversity of macroinvertebrates may depend on the timing and duration of construction impacts (Cline et al., 1982). Stout and Coburn (1989) found an absence of macroinvertebrate shredders in pools below highway construction. Fine sediment from highway construction may result in reduced macroinvertebrate diversity and density (Lenat et al., 1981). Highway construction can immediately reduce the overall abundance of stream fishes by over 50% (Whitney and Bailey, 1959; Barton, 1977). Taylor and Roff (1986) reported that the abundance of bottom-feeding fishes is initially reduced, but recovers after fine sediment deposition rates decline. Fish and invertebrate communities begin recovering after the fine sediment loads are reduced and deposits wash downstream, but full recovery may require years (Taylor and Roff, 1986).

Fine sediment pollution degrades stream biotic communities through a variety of mechanisms. Stream periphyton and macrophytes are abraded, suffocated, and shaded by fine sediment (Waters, 1995). Fine sediment loads impact macroinvertebrates by inducing catastrophic drift (Culp et al., 1986), damaging individual's respiratory structures (Lemly, 1982), and reducing habitat by clogging interstitial spaces in streambeds (Lenat et al., 1981). Fine sediment can also clog the gills of fishes and reduce the quality of their habitats for feeding by impairing visibility and reducing prey abundance (Bruton, 1985). It is possible that construction interferes with a variety of feeding strategies; Berkman and Rabeni (1987) found that fine sediment deposition reduced populations of both insectivorous and herbivorous fishes. In addition, fine sediment suspended in the water can lower reproductive success of fishes (Burkhead and Jelks, 2001). For example, egg survival of some species depends on substrate that is permeable to water flow (Kondou et al., 2001).

Highway Presence

Although highway construction can be highly detrimental to stream habitat and biota, construction sites are sparse compared to the land covered and increasingly affected by existing highways. Currently in the United States, there are 6.3 million km of public roads, 60% of which are paved with a surface area of about 50,000 km^2 (Eldin, 2002). At present,

20% of the United States' land area is directly affected by road presence (Forman, 2000), and 50% is within 382 m of a road (Ritters and Wickham, 2003). In contrast to the localized, temporary effects of highway construction, the extensive effects of highway presence are persistently generated by highways with direct hydraulic connections to streams (Table 1).

Highways and Physical Habitat

Although pulses of highway runoff can substantially affect stream channels, we found no studies of its impact on physical stream habitat. However, many investigators have examined the impacts of logging roads (see Gucinski et al., 2001). Although unpaved forest roads are not the subject of this review and differ from paved highways in many aspects, they are similar in that their impervious surfaces collect stormwater and route runoff into streams. Collecting and routing runoff to streams causes logging roads to increase the magnitude and frequency of stream flooding (King and Tennyson, 1984; Jones and Grant, 1996). These runoff changes are also characteristic of urban areas and cause a variety of physical changes to stream channels, such as channel widening and downcutting (see Urbanization section). However, because paved roads are only minor components of the total impervious surfaces of an urban watershed, the presence of a single highway in a watershed likely results in less changes to flow regimes and, ultimately, less severe changes to physical stream habitat than urban development.

Streams near highways are often channelized during construction. However, unlike many construction impacts such as fine sediment pollution, this modification has continual long-term consequences for physical stream habitat. Channelization increases channel slope, reduces base flows, increases peak flows, alters substrate composition, and severs floodplain links (Hubbard et al., 1993). Overall, channelization reduces the habitat diversity characteristic of natural streams by replacing coarse substrates with finer substrates, reducing depth and velocity heterogeneity, creating more laminar flows, removing cover, and eliminating natural pool-riffle sequences (Peters and Alvord, 1964; Narf, 1985).

If engineered properly, bridges may cause minimal impacts on the physical stream channel; however, through channelization or poor construction practices, bridges can destabilize stream channels. Although culverts are generally more detrimental to stream habitat and biota, they are often installed as a cheaper alternative to spanning structures. The presence of cluverts destabilizes stream channels by interrupting the downstream transport of woody debris, sediment, substrate, and water. Although few quantitative studies of the impact of culverts on physical stream habitat are available, Gubernick et al. (2003) provided a qualitative overview. Unlike dynamic natural stream channels, culverts are rigid and unaccommodating to changes in channel morphology. In addition, the stream channel is often widened above the culvert, reducing current velocities and forming a sediment trap. Although downstream sediment flow is reduced above the culvert, it continues or accelerates below the culvert causing channel downcutting and resulting in an elevation drop, even if initial construction put the pipe at stream level. Typically, culverts are sized to accommodate rare flood flows but are too small to allow passage of woody debris. Accumulations of woody debris near the inlet can starve downstream areas of this important component of stream habitat (see Urbanization section) and may plug the culvert, causing failure of road fill during floods and increasing the risk of catastrophic debris torrents.

Highways and Stream Chemistry

Highway surfaces collect a variety of chemical pollutants from automobile traffic and are disproportionate contributors to overall pollutant loads. For example, public highways

cover 8% of Rhode Island, but produce 16% of the state's oil and grease pollution, and 77% of the state's zinc pollution (Hoffman *et al.*, 1985). These pollutants are mobilized by runoff water and transported to streams where they accumulate in sediments and biota and spread downstream, resulting in chronic and widespread effects. This runoff represents an important, but relatively unstudied, component of stream pollution (Wu et al., 1998).

Traffic residue adds a variety of metals to highway runoff, including iron, zinc, lead, cadmium, nickel, copper, and chromium. Tires contain up to 1% zinc by weight (Hedley and Lockley, 1975) and are a significant source of zinc in the environment (Davis et al., 2001). Brake pad dust contributes copper (Davis et al., 2001). These metals accumulate in roadside dust (Leharne et al., 1992), soil (Goldsmith et al., 1976; Garcia-Miragaya et al., 1981), and stream sediments (Van Hassel et al., 1979; Maltby et al., 1995b). The concentrations of metals in stream sediments are positively related to the volume of traffic (Van Hassel et al., 1980; Callender and Rice, 2000) and accumulate in proportion to the length of highway drained (Maltby et al., 1995b), suggesting that pollution will be most severe when large highways are drained by small streams.

Highway surfaces also accumulate petroleum from automobile traffic. Motor oil accumulates from crankcase drippings, washes off the highway surface, and accumulates in stream sediments (Hoffman et al., 1985). Until the Clean Air Act of 1970 phased out leaded gasoline, lead was the most widespread metal pollutant from automobile traffic. Unleaded gasoline permits the use of catalytic converters, which convert gaseous exhaust pollutants such as carbon monoxide, nitrous oxides, and hydrocarbons to less toxic chemicals such as carbon dioxide, nitrogen, and water. The chemical reactions are catalyzed in automobile exhaust systems by platinum group elements (PGEs), including platinum, palladium, and rhodium, which are emitted on highway surfaces during operation. Since the introduction of catalytic converters, PGEs have become a new and relatively unstudied metal pollutant of stream sediments (Rauch and Morrison, 1999). In addition, iridium, rubidium, and osmium are common impurities in PGE catalysts and may also be deposited on highways (Rauch et al., 2004). Concentrations of PGEs in roadside soils are related to traffic volume and are increasing to such a degree that their recovery (i.e., mining roadside soil) may become economically viable (Ely et al., 2001).

In areas that undergo winter weather, deicing salt is another widespread, but little studied, chemical pollutant of streams. Deicing salt is spread on highways in anticipation of and during snow and ice accumulation, from where it washes directly into streams or is stored in the soil. A study in Pennsylvania found 20- to 30-fold increases in a stream's conductivity during winter thaws (Koryak et al., 2001). Although concentrations harmful to fish are considered rare (Transportation Research Board, 1991), few studies have addressed the effects of these "shock loads" of salt on stream biota. Koryak et al. (2001) observed only pollution-tolerant macroinvertebrates and stressed fish communities in areas receiving shock loads of deicing salt. Furthermore, deicing salt may be contaminated by metals and nutrients. Phosphorous, lead, and zinc were found in highway deicing salt and anti-skid sand in Minnesota (Oberts, 1986) and iron, nickel, lead, zinc, chromium, and cyanide in deicing salt in England (Hedley and Lockley, 1975). Road salt that does not run off directly into streams may still cause chronic problems through slow release into adjacent soils; chlorine ions from road salt have a soil residence time of at least 2 years (Mason et al., 1999).

Another concern associated with the presence of a highway is the inevitability of toxic chemical spills. In 1982, hazardous materials made up more than 25% of all domestic freight shipments (List and Abkowitz, 1986). Almost all types of hazardous wastes and 62% of all hazardous materials (by weight) are moved by truck (Abkowitz et al., 1989; Atkinson and Cairns, 1992). Unfortunately, accidental releases during shipping are not infrequent.

Between 1990 and 1994 an average of 10,000 accidents per year were reported, releasing 2,445 kl of hazardous materials annually on U.S. highways (USEPA, 1996).

Biological Effects of Highways

Highways have many detrimental effects on stream biota. Toxic chemical spills often occur from truck accidents, and can cause fish kills extending downstream for great distances (kms). Stream crossings may be especially vulnerable to spills because bridge surfaces encourage automobile accidents because during winter weather conditions by icing more frequently than terrestrial paved surfaces. Furthermore, the inherent vicinity of bridge accidents to streams increases that risk that spilled chemicals may enter streams before containment. Accidental spills are particularly devastating for isolated populations of rare species with limited potential for movement and recolonization, such as freshwater mussels. Although there are many documented cases of such acute effects (USEPA, 1996), we found no studies describing chronic changes in macroinvertebrate or fish communities resulting from repeated toxic spills. Studies examining streams after catastrophic toxic spills have documented eventual recovery and recolonization from adjacent areas (Ensign et al.,1997; Meade, 2004), emphasizing the importance of well-connected habitats to increase resilience of stream biota to the effects of highway presence. Thus, stream reaches that are isolated by culverts, dams, or natural barriers may be particularly vulnerable to spills.

Macroinvertebrates and fishes near highways may have elevated metal concentrations in body tissues. Levels of lead and zinc in fishes and aquatic macroinvertebrates may be locally related to the amount of traffic at upstream highway crossings (Van Hassel et al., 1980) and regionally related to highway densities across large areas (Stemberger and Chen, 1998). Fish species accumulate metals from highway runoff at differential rates (Ney and Van Hassel, 1983). Aquatic macroinvertebrates may absorb platinum from stream sediments (Rauch and Morrison, 1999). The accumulation of toxic chemicals in animal tissue likely results in widespread impacts that spread to terrestrial communities, particularly animals that feed exclusively on aquatic species (e.g., many members of the avian order Ciconiiformes).

Many components of highway runoff such as metals and petroleum are suspected toxicants to aquatic organisms. Although few studies have addressed the toxicity of highway runoff, the sediment from contaminated streams is considered more toxic than the water. Although a variety of potential toxicants, including hydrocarbons, copper, and zinc are found in highway runoff, polycyclic aromatic hydrocarbons (PAHs) in stream sediments may be responsible for the majority of macroinvertebrate toxicity (Maltby et al., 1995a). Boxall and Maltby (1997) confirmed that three specific PAHs, pyrene, fluoranthene, and phenanthrene, were major sediment toxicants for *Gammarus pulex* and accounted for >30% of the toxicity of runoff-contaminated sediments.

Comparisons of macroinvertebrate communities above and below highway crossings are rare but indicate that reductions in diversity and pollution-sensitive species below highway crossing are most pronounced where small streams receive runoff from large sections of highways (Maltby et al., 1995b). These patterns may reflect greater hydrocarbon pollution in sediments below road crossings. Reductions in pollution-sensitive shredders may result in slower leaf litter breakdown (Maltby et al., 1995b), altering stream productivity, nutrient cycling, and food webs.

In addition to chemical effects, highways also impact biota through physical changes to the stream channel. Channelization can have numerous effects on the physical structure and natural environmental regimes of stream systems; these dynamics provide a mosaic of habitats to support resident organisms (Stanford et al., 1996; Poff et al., 1997; Poole, 2002).

Moyle (1976) compared channelized and unchannelized sections of a California stream and found the biomass of fish and invertebrates in channelized locations was less than one-third of that in unchannelized locations. He also found differences in fish and macroinvertebrate species composition between channelized and unchannelized areas. Channelization may reduce the recruitment and production of fishes by eliminating nursery habitat. For example, removal of gradually sloping streambanks increases the area of unsuitable habitat with velocities greater than the swimming speeds of age–0 fishes (Copp, 1991, 1997; Scheidegger and Bain, 1995; Mann and Bass, 1997; Mérigoux and Ponton, 1999; Meng and Matern, 2001).

Culverts are a feature of highway presence that can have a variety of negative impacts on stream biota. Culverts provide poor internal habitat due to low-bottom complexity and uniformly high-flow velocities inside culverts provide poor habitat (Slawski and Ehlinger, 1998), but most importantly, they are notorious fish movement barriers. The effects of highway crossings on stream fish movement depend on the swimming speed and behavior of individual species (Toepfer et al., 1999). Fish passage is obstructed by high current velocities and shallow depths inside culverts, as well as vertical drops at the culvert outflow (Baker and Votapka, 1990). In addition, concrete box culverts may develop internal gravel bars (Wellman et al., 2000) that impede fish movement. Warren and Pardew (1998) found that overall fish movement was an order of magnitude lower through culverts than through other crossing types or natural channels in small, warmwater Arkansas streams. Culverts throughout a tributary network can reduce production of species that require spawning migrations, such as coho salmon *Oncorhynchus kisutch*, by preventing adults from reaching spawning habitat (Beechie et al., 1994). Barriers can isolate populations, resulting in reduced genetic diversity and increased probability of extinction due to demographic instability and impeded recolonization. Most investigations of fish movement barriers have focused on economically important fishes with known migration patterns; for example, Belford and Gould (1989) determined combinations of water velocity and culvert length that prevented passage by brook trout *Salvelinus fontinalis*, rainbow trout *Oncorhynchus mykiss*, and brown trout *Salmo trutta*. However, entire fish communities are vulnerable to highway crossing movement barriers (Jackson, 2003) and the importance of movement and movement barriers to nongame fishes and fish communities is poorly understood. In one of the few published studies for a nongame species, Schaefer et al. (2003) found that a variety of culvert types significantly decreased the probability of movement of the federally threatened leopard darter *Percina pantherina* between habitat patches. Although culverts present a variety of obstacles to fish movement, engineers designing passable culverts may narrowly focus on the effects of singular parameters such as vertical outflow drop distance or current velocity (e.g., Rowland et al., 2003) and not consider the cumulative effects of multiple passage inhibiting features.

Urbanization

Urbanization is difficult to define, as the meaning of "urban" varies across disciplines (Paul and Meyer, 2001). We modify the definition by Kemp and Spotila (1997) and define urbanization as development in a watershed, such as building construction, that changes land use typical of rural areas (e.g., farming, grazing) to uses more typical of residential and industrial areas (e.g., retail, suburban residential areas, plants and factories). This definition describes the general process of watershed-altering development that is characteristic of the urban landscape and the focus of this review.

The construction of new highways is the "quintessential public sector investment" by which government attempts to encourage economic growth in rural areas (Chandra and Thompson, 2000). At the state level, new highways are ineffective at increasing economic activity (Evans and Karras, 1994; Holtz-Eakin, 1994; Dalenberg and Partridge, 1997), but they effectively redistribute economic activities among locales. New highways reduce traditional rural economic activities of nearby counties such as agriculture, but enhance and concentrate urban economic activities such as manufacturing and retail in the county the highway intersects (Rephann and Isserman, 1994; Chandra and Thompson, 2000). The construction of new highways also increases the price of agricultural land (Shi et al., 1997), thereby encouraging development. Shifting the economic productivity from rural to urban activities promotes urbanization, at least in the county the highway passes through, as reduced travel time to cities encourages establishment of commerce in previously undeveloped areas. Although final decisions for urban development are made by local governments, new highways clearly and purposely provide impetus for urban development.

Much of our understanding of the relation between new highways and urban development is based on patterns observed at interstate highway exits. Key characteristics of interstate exits related to the rate and nature of urban development in North Carolina include traffic volume of the interstate and crossroad, location, and population of nearby communities, distances to urban centers, degree of preexisting development, and distance to the next interchange (Hartgen et al., 1992). A later study concluded that these relationships were consistent for interstate exits nationally (Hartgen and Kim, 1998). Hartgen et al. (1992) described the general requirements, stages, and potential paths of interchange development, and all potential paths predict that interstate construction leads to the conversion of forested and agricultural areas to commercial or residential development. Improvements to existing highways, such as lane additions, also increase development activity along the highway corridor (Cervero, 2003).

Other studies have documented land use change induced by the presence of nearby highways. Although these studies do not address the construction of new highways, they provide insight into the relationship between a new highway and landscape urbanization at points other than exits. Bradshaw and Muller (1998) forecasted the conversion of farmland to urban areas in California, describing highways between cities as "magnets for decentralized growth." In the southern Appalachian Mountains, areas close to highways were more likely to experience development (Wear and Bolstad, 1998).

Although the relation between the construction of a new highway and urban development is intuitive, predictable, and often a declared political goal, few investigators have examined this connection. Indeed, this connection is a contentious issue for transportation planners. The position that new highways do not result in urban development, although apparently ubiquitous among transportation planners, is not well-supported by published studies and our literature review failed to produce any peer-reviewed examples refuting a positive relation between highway construction and urban development (but see Hartgen (2003a, 2003b)).

A stream's physical habitat and chemical environment are largely products of its watershed. Thus, as a watershed urbanizes, changes occur in stream habitat, water chemistry, and ultimately biota. Similar to the presence of a hydraulically connected highway, urban development continually affects streams and causes extensive and chronic impacts (Table 1), but at greater magnitudes. Runoff from urban areas contains all the chemical pollutants from automobile traffic as well as those from urban sources. In addition, urbanization drastically alters how a watershed produces stream flow, resulting in many changes in physical habitat.

Urbanization and Physical Habitat

Undeveloped watersheds are characterized by land surfaces that are pervious to precipitation. Rain falling in undeveloped watersheds infiltrates the soil and reaches streams slowly as subsurface flow. The urban landscape, however, is characterized by rooftops, asphalt, compacted soils, and other highly impervious surfaces (Schueler, 1994, 1995). These impervious surfaces with direct hydraulic connections to streams (Schueler, 1994; Wang et al., 2001, 2003), capture precipitation and route it quickly into storm sewers and gutters and, ultimately, into streams (Hollis, 1975). Similarly, precipitation falling on impervious surfaces without direct hydraulic connections to streams may reach streams quickly as overland flow (Horton, 1945; Leopold, 1973). Thus, urbanization fundamentally alters the delivery of water to streams (Booth, 1991).

These changes in precipitation delivery alter stream flow regimes. As a watershed urbanizes, peak flow volume from precipitation events increase (Hollis, 1975; Beard and Chang, 1979; Neller, 1988; Booth, 1990; Clark and Wilcock, 2000; Rose and Peters, 2001), thereby increasing the frequency of bankfull flows (Leopold, 1973; Hollis, 1975; Arnold et al., 1982; Moscrip and Montgomery, 1997). Even low levels of paving increase the magnitude of frequent floods (recurrence interval $\leq$ 1 year); for example, paving 20% of the watershed can increase the peak discharge of the mean annual flood by an order of magnitude (Hollis, 1975). Thus, discharge rates that previously occurred once every 2 years may double in frequency following watershed development (Booth, 1991). Ten-year floods may occur 2.5 to 10 times more frequently following watershed urbanization (Moscrip and Montgomery, 1997). In addition, precipitation events that produced no increase in stream flow prior to urbanization may generate substantial flooding following watershed urbanization (Booth, 1991).

These changes in flood frequency and magnitude result in a variety of changes to physical features of streams. Bankfull and greater flows cut and form stream channels and adjust channel capacity such that bankfull conditions occur on an average of once every 1 to 2 years (Wolman and Miller, 1960; Leopold, 1973). The increased frequency of bankfull flows following urbanization causes a stream to increase its channel capacity by eroding its banks, downcutting its channel, or both (Hammer, 1972; Leopold, 1973; Arnold et al., 1982; Allen and Narramore, 1985; Booth, 1990, 1991; Gregory et al., 1992; Pizzuto et al., 2000). Thus, urban streams are wider and deeper than unaffected channels.

Impervious surfaces increase peak flow at the expense of base flow. Base flows result from subsurface flow and groundwater that steadily contributes to streams between precipitation events. Because impervious surfaces prevent precipitation from infiltrating below the surface, urban streams are characterized by low base flows (Simmons and Reynolds, 1982; Wang et al., 2001, 2003). Low flows combined with the effects of channel enlargement, results in urban streams that feature oversized stream channels with little water between runoff events.

Streams in urbanized watersheds enlarge their channels by eroding their banks. Bank erosion as well as runoff from urban construction activities adds fine sediment to the receiving stream (Waters, 1995; Trimble, 1997). Typically, fine sediment is a minor component of pristine streams. For example, a stream flowing through a completely forested watershed receives about 11.3–33.8 metric tons per ha of sediment annually; in contrast, an urbanizing watershed may receive more than 226,000 metric tons per ha annually (Wolman, 1967; Wolman and Schick, 1967). This dramatic increase in fine sediment can devastate, and ultimately, extirpate stream biota (see Highway Construction section). Channel enlargement

may be balanced by rapid loading of fine sediment during the initial phases of urbanization. For example, Wolman (1967) hypothesized that high sediment loads from the construction phases of urbanization could temporarily clog and constrict stream channels, a phenomenon later observed by Leopold (1973).

When the extent of urbanization in a watershed stabilizes, stream channel enlargement may cease, and the channel banks may restablize. In addition, as the rate of urban development declines, fine-sediment loading may be greatly reduced as construction site soils are stabilized via revegetation or pavement, and prior deposits may be removed by scouring during subsequent flooding (Wolman, 1967; Clark and Wilcock, 2000; Finkenbine et al., 2000). However, the process of bank erosion, downcutting, and channel adjustment may continue for several decades, and some streams never stabilize (Henshaw and Booth, 2000).

Urbanization typically results in loss of streamside (riparian) vegetation as areas near streams are cleared. The degree of riparian disturbance varies with type of urban land use. For example, Thibault (1997) found the land used for transportation, schools, and industry had more intact riparian areas than residential, commercial, and recreational land. Riparian vegetation is a critical component of the watershed (reviewed by Karr and Schlosser, 1978; Gregory et al., 1991; Naiman and Décamps, 1997; Pusey and Arthington, 2003) and, although they cover a small percentage of the watershed, riparian areas are disproportionately important for stream health. Intact riparian areas absorb and filter out metals, fine sediment, and nutrients from overland runoff (Castelle et al., 1994) and generally mitigate the physical and chemical effects of urbanization (May et al., 1997). Riparian vegetation stabilizes streambanks and reduces bank erosion (Whipple et al., 1981; Beeson and Doyle, 1995; Finkenbine et al., 2000), and helps moderate urban stream temperatures (LeBlanc et al., 1997).

Riparian vegetation contributes leaves, wood, and other organic debris to streams. The biota of small ($\leq$ fourth-order) streams, such as those generally associated with urban areas (Heaney and Huber, 1984), depend on leaves and organic inputs as their energy base (Vannote et al., 1980; Hawkins and Sedell, 1981). Large woody debris is an important component of stream channels because it stabilizes stream banks (Keller and Swanson, 1979; Booth, 1991; Gregory et al., 1991; Finkenbine et al., 2000), creates pools (Keller and Swanson, 1979; Larson et al., 2001), and provides habitat for macroinvertebrates (Benke et al., 1985) and fishes (Angermeier and Karr, 1984; Flebbe and Dolloff, 1995). In urban areas, recruitment of woody debris declines as development removes floodplain trees and instream abundance is typically reduced by intentional debris removal (Larson et al., 2001).

Stream water temperature is a major determinant of the distribution and abundance of aquatic biota and is primarily regulated at two spatial scales, the riparian and the watershed. Riparian vegetation shelters streams from warming by absorbing or reflecting sunlight before it reaches the water. Thus, loss of riparian vegetation contributes to the warming of urban streams (Barton et al., 1985; LeBlanc et al., 1997). At the watershed scale, impervious surfaces, especially parking lots, collect and heat runoff water before it reaches streams. For example, Van Buren et al. (2000) developed a computer model to predict runoff temperature and observed that a parking lot produced runoff 5.9°C warmer than summer rainfall. The maximum daily water temperature in Wisconsin and Minnesota streams increase by 0.25°C with every 1% increase in the impervious area of the watershed (Wang et al., 2003). In addition to increases in average water temperature, urban streams exhibit increased temporal variability (Moglen et al., 2004).

Urbanization and Water Chemistry

Urban runoff contains a variety of chemical pollutants including petroleum, metals, and nutrients. Rivers and streams receive the majority of urban runoff (84%) (Heaney and Huber, 1984) and chemical pollutants are often stored in stream sediments. House et al. (1993) reviewed the constituents and impacts of urban runoff on receiving waters.

Oil and grease enter urban runoff from a variety of sources including deliberate dumping, automobile engine emissions, and chemical spills; however, the majority originates from automobile crankcase drippings (Hoffman et al., 1982). Parking lots accumulate oil and grease deposited by parked vehicles and become the primary land use source of oil and grease in urban runoff. Stenstrom et al. (1984) observed concentrations of oil and grease up to 15 mg/l in parking lot runoff. Automotive sources of metals in urban runoff include zinc from tire wear (Hedley and Lockley, 1975) and motor oil (Davis et al., 2001), platinum from catalytic converter emissions (Rauch and Morrison, 1999), and lead from motor oil (Davis et al., 2001).

In addition to automotive sources, urban runoff accumulates metals from a variety of other sources. For example, iron originates from the corrosion of steel (Characklis and Wiesner, 1997), zinc from the corrosion of galvanized metals (Hedley and Lockley, 1975), roofing, and painted wood (Davis et al., 2001), and lead from brick and painted surfaces (Davis et al., 2001). Other metals in urban runoff include chromium and nickel (Klein et al., 1974; Helsel et al., 1979; Rhoads and Cahill, 1999). Metals from urban runoff accumulate in stream sediments (Garie and McIntosh, 1986; Rauch and Morrison, 1999), where concentrations are related to both population and traffic densities (Callender and Rice, 2000).

Urban runoff is high in nutrients such as nitrogen and phosphorous that can result in detrimental algal blooms and decreased dissolved oxygen levels. Nutrient levels in streams are typically predictable from land use (e.g., Herlihy et al., 1998). For example, the risk of nutrient pollution increases as nonforest land cover reaches 10% of the watershed (Wickham et al., 2000). Historically, nutrient pollution has been associated with agricultural land use, but urban land often produces greater nutrient loading. For example, concentrations of total phosphorous and total nitrogen in urban streams were 2 to 10 times higher than agricultural and forested streams in Missouri (Smart et al., 1985). Other studies have reported higher concentrations of nitrogen and phosphorous in urban streams than in agricultural and forested streams (Osborne and Wiley, 1988; Wahl et al., 1997).

Biological Impacts of Urbanization

Altered and impaired biotic communities are characteristic of urban streams. Urban macroinvertebrate communities have reduced taxa richness (Garie and McIntosh, 1986; Jones and Clark, 1987; Kemp and Spotila, 1997), reduced density (Garie and McIntosh, 1986), lower index of biotic integrity (IBI) scores (Steedman, 1988; Kennen, 1999), lower functional diversity (Pedersen and Perkins, 1986), and lower taxonomic diversity (Pratt et al., 1981; Shutes, 1984; Pedersen and Perkins, 1986). In an extensive survey of New Jersey streams, Kennen (1999) found that locations with severe macroinvertebrate community impairment were most commonly downstream from urban areas. Urbanization reduced taxa-diversity and richness by reducing the density of pollution intolerant taxonomic orders (Ephemeroptera, Coleoptera, Megaloptera, and Plecoptera) and increasing the density of pollution tolerant Diptera in Virginia streams (Jones and Clark, 1987). Macroinvertebrate diversity may decline progressively as streams flow through urban areas (Pratt et al., 1981).

Macroinvertebrate diversity was reduced to taxa-tolerant of physical disturbances in an urban Washington stream (Pedersen and Perkins, 1986).

Fish communities are similarly impaired by urbanization. Urban stream fish communities have lower overall abundance (Weaver and Garman, 1994; Albaneese and Matlack, 1998; Wang et al., 2000, 2003), diversity (Tramer and Rogers, 1973; Klein, 1979; Scott et al., 1986; Weaver and Garman, 1994; Onorato et al., 2000; Wang et al., 2000), IBI scores (Schleiger, 2000; Wang et al., 2003), taxa richness (Weaver and Garman, 1994; Albanese and Matlack, 1998; Schleiger, 2000; Wang et al., 2000), darter species richness (Weaver and Garman, 1994; Albanese and Matlack, 1998; Schleiger, 2000), and darter abundance (Kemp and Spotila, 1997; Onorato et al., 2000), and are dominated by pollution tolerant species (Wichert, 1994, 1995; Kemp and Spotila, 1997; Albanese and Matlack, 1998; Wang et al., 2003). Lead content in fish tissue is higher in urban areas (Stemberger and Chen, 1998). Furthermore, the proximity of urban streams to humans increases the risk of nonnative species introduction and establishment.

Although many studies describe the alteration of stream macroinvertebrate and fish communities by urbanization, the mechanisms linking specific urban impacts to specific community responses are largely unknown. Since multiple chemical and physical impacts of urbanization occur simultaneously, it is difficult to determine how specific environmental stresses affect biotic communities. However, changes in physical habitat likely impacts biotic communities more than changes in water chemistry. For example, fish and macroinvertebrate communities become impaired at the onset of urbanization (Klein, 1979), when physical changes are more prevalent than water chemistry changes. Most water chemistry changes are not detectable until urban land cover exceeds 40% of a watershed (May et al., 1997).

Threshold Effect of Urbanization

In the last 100 years, the field of stream ecology has expanded its spatial focus from small habitat patches to entire watersheds (Miranda and Raborn, 2000). Consistent with this paradigm shift and advances in geographic information systems and remote sensing, recent studies have addressed how different spatial configurations of urbanization affect stream communities. For example, investigators have documented relations between percent urban land cover (ULC) (Steedman, 1988), percent impervious area (Klein, 1979; Booth and Jackson, 1997; Wang et al., 2000), percent impervious area with direct connections to streams (Booth and Jackson, 1997; Wang *et al.*, 2001, 2003), and biotic parameters. These studies overwhelmingly conclude that very low levels (8–10%) of ULC (or surrogate measures) result in highly altered fish and macroinvertebrate communities. Even after this low level of development, successful restoration of these communities back into preurban conditions may be near impossible, as this small change could result in a shift into a new, less desirable, stable state that is difficult to reverse (Mayer and Rietkerk, 2004).

Initial watershed urbanization following the construction of a new highway is more damaging to stream ecosystems than later, more extensive, development. In macroinvertebrate and fish communities, pollution- and stress-tolerant species rapidly replace intolerant species as ULC approaches 10%. After ULC exceeds 10%, further increases result in little or no fish community changes (Schueler, 1994; Booth and Jackson, 1997; Wang et al., 1997, 2000, 2001). For perspective, 10% ULC is characteristic of areas typically considered "suburban" rather than "urban" (Wang et al., 2000). Although agriculture can have similar effects, streams may support relatively healthy fish communities until agricultural

land cover exceeds 80% of the watershed (Wang et al., 1997). Because fish communities in currently undeveloped or agricultural watersheds are likely to be severely degraded by the onset of urbanization (Wang et al., 2000), protection against urbanization impacts should focus on watersheds where urbanization has not yet begun (May et al., 1997). In the context of highway impacts, this means that the greatest damage to stream health is inflicted by building new highways through undeveloped watersheds, which, ultimately, become subject to urban sprawl.

Conclusions

The short-term environmental consideration of transportation projects in EISs and EAs focuses on the initial construction impacts. However, the most serious threats to stream ecosystems are the long-term secondary effects of a highway's presence in the watershed and the cumulative effects of urban development. For example, the biotic integrity of streams in undeveloped (primarily forested or agricultural watersheds) is substantially degraded by the onset of urbanization, thus, streams in undeveloped watersheds are more sensitive to the construction of new highways than streams in urban watersheds. Because many aquatic impacts from the existence of the highway and urban development are long-term considerations, the narrow, short term focus of EISs and EAs provides inadequate protection for stream ecosystems. As new highways continue to diminish the percentage of the landscape that is unaffected by roads, expanding the spectrum of environmental impacts considered for highway projects is increasingly important.

Highway construction and highway presence impose a variety of impacts on stream habitat and biota. Urban development results from the construction of new highways and is clearly the most pernicious threat, as stream habitat and biota are sensitive to even low levels (<10%) of development in a watershed. Watershed urbanization is a predictable indirect or secondary effect of the construction of new highways and NEPA, the CEQ, and various state environmental laws require consideration of indirect and cumulative effects in EISs and similar documents (CEQ, 1997). Although secondary and cumulative impacts are often important considerations of environmental agencies that comment on such assessments (e.g., NCWRC and NCDPR, 2002), landscape urban development resulting from the construction of new highways is generally ignored by the transportation agencies preparing the assessments. The importance of considering the impacts of landscape urban development during initial planning is amplified because this is the final opportunity to consider all effects cumulatively. Landscape urbanization ultimately results from the "tyranny of small decisions" (Odum, 1982) on many individual projects, the cumulative impacts of which are overlooked by the Clean Water Act section 404 permitting process (Stein and Ambrose, 2001), as well as other regulatory mechanisms.

Given the severity and extent of highway impacts on stream biota, we were impressed by the paucity of peer-reviewed literature on many aspects of those impacts. We believe the lack of published studies demonstrates a failure of both management agencies and academic researchers to address a severe and politically thorny environmental issue. Well-designed descriptive studies, in addition to conceptual or theoretical investigations, could contribute substantially to how society views and manages highway impacts. We urge scientists, managers, and policymakers to cooperate more closely to generate comprehensive knowledge about how highways affect ecosystem operation, make that knowledge available to the public (e.g., in EISs and EAs), and apply that knowledge to policy decisions regarding development of sustainable transportation systems.

Although highway construction is ongoing, pervasive, and has severe biological consequences, we found few published investigations of its impacts on streams. We encourage environmental and fisheries scientists to pay closer attention to the effects of new highway construction or highway improvements on streams. Carefully designed, comparative investigations could contribute substantially to our understanding of the differential impacts of various construction techniques, as well as the efficacy and risk of failure of various mitigation practices.

There are many unexploited opportunities to investigate the impacts of highway presence on stream biota. Researchers know little about the occurrence, loading rates, and biotic responses to specific contaminants in highway runoff. Understanding the dynamics and roles of specific pollutants could facilitate more effective mitigation. Future investigation should address the relative importance of chronic pollution, such as metals accumulated in stream sediments, versus acute impacts such as pulses of petroleum and deicing salt. Additional research is also needed to understand how highway crossings, especially culverts, affect fish populations via constraints on movement and how highway networks alter flow regimes of watersheds.

Impairment of stream biotic communities due to urbanization is severe and widely studied. However, opportunities still exist for relatively simple descriptive investigations. For example, we are impressed but the paucity of studies addressing stream thermal pollution from urban runoff and reduced riparian areas. In addition, techniques for minimizing impact or restoring biotic integrity are poorly developed. Research topics that may yield especially useful results include a) the relative importance and biological effects of specific components of urban development: e.g., highway, commercial, or residential, b) the scenarios under which impacts are reversible, and c) the efficacy of mitigation measures: e.g., stormwater retention or treatment and forested buffers. Finally, comprehensive risk analyses that incorporate both social and biotic components are badly needed to examine potential for catastrophic events during all phases of new highway impacts. Risks include mitigation failures and catastrophic spills during the highway construction, presence, and urbanization phases. Depending on the nature of the biotic community (e.g., is it isolated, is the stream small, does it contain sessile species), it may be more or less vulnerable to these kinds of events. Without a spatially explicit, rigorous risk analysis framework, managers cannot properly weigh the risks and benefits of road projects proposed in their areas and have no scientific basis for proposing alternatives that may be less damaging to stream ecosystems.

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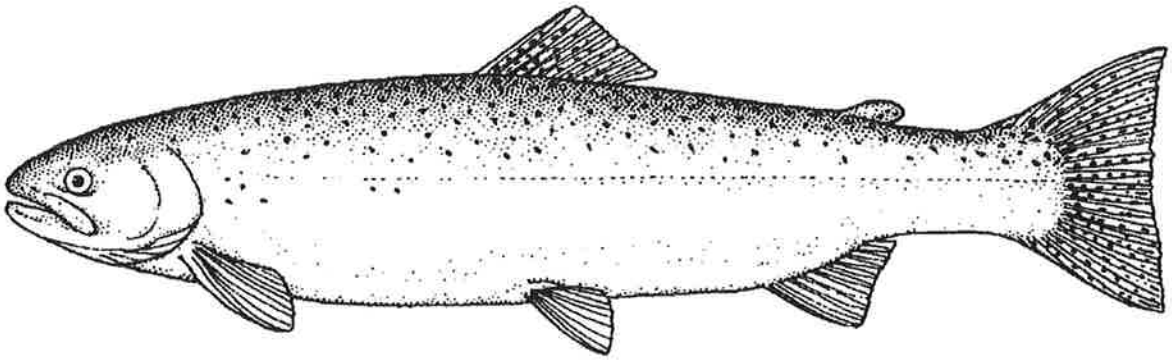
EXHIBIT 15

SOUTHERN CALIFORNIA STEELHEAD RECOVERY ASSESSMENT:

San Mateo Creek
Santa Margarita River
A Wider Role for TU in Protection and Recovery



Prepared for the South Coast Chapter of Trout Unlimited

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National Trout Unlimited Embrace-A-Stream Grant Program

Report by Patrick Higgins, Consulting Fisheries Biologist

January 1991

TROUT UNLIMITED

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SOUTHERN CALIFORNIA STEELHEAD RECOVERY ASSESSMENT

Introduction

The South Coast Chapter of Trout Unlimited won an Embrace-A-Stream grant in November 1989 from national Trout Unlimited. The objective of the project was to explore the possibility of restoring steelhead trout (Oncorhynchus mykiss) to San Mateo Creek which flows into the Pacific Ocean near San Clemente, California (Figure 1). A scoping trip to San Mateo Creek occurred in June of 1990. Suggestions from key resource people consulted during the trip led to expanding the scope of the study.

The Santa Margarita River, further south near Oceanside (Figure 1), may have had a viable steelhead run more recently than San Mateo Creek. A preliminary assessment of the possibility of restoring steelhead to the Santa Margarita was also conducted. Since restoration of steelhead in either of these streams is a major undertaking, the most logical initial efforts may be for TU to play a role in preserving steelhead where they still exist in their southern range. This report has three sections: an in depth analysis of San Mateo Creek steelhead recovery prospects, preliminary assessment of Santa Margarita River steelhead restoration feasibility, and a discussion of possible roles for Trout Unlimited in protecting remaining steelhead trout populations in southern California. The report on San Mateo Creek is the most extensive and in depth portion because it was the initial objective of the project. Much of the background information on San Mateo Creek comes from research done by Dave Woelfel for his Master's Thesis which he shared with the author of this report.

SAN MATEO CREEK

Study Site

San Mateo Creek flows from headwaters in the Cleveland National Forest in the Santa Ana and Santa Margarita Mountains. The area of the watershed is approximately 137 square miles with the lower half falling mostly within northern San Diego County while the upper half is in western Riverside County (Figure 2). A small portion of the lower drainage is in Orange County. The climate could be characterized as Mediterranean near the coast but air temperatures further inland can be over 100 degrees F in the summer. Peaks of over 3500 feet stand at at the head of the watershed and winter temperatures can drop below freezing in up stream areas. Rainfall in the San Mateo Creek basin varies from an average of 13.4 inches per year on the coast to approximately 25 inches per year near Elsinore Peak in the upper watershed. Ninety percent of the rainfall occurs between November and April.

Woelfel (in press) suggests that the San Mateo Creek watershed is most logically divided into two land forms. A broad alluvial valley boarders the creek from its mouth to about 10.5 miles upstream while the upper reaches of the creek have cut a deep canyon through the steep rugged mountains. The portion of San Mateo Creek in the

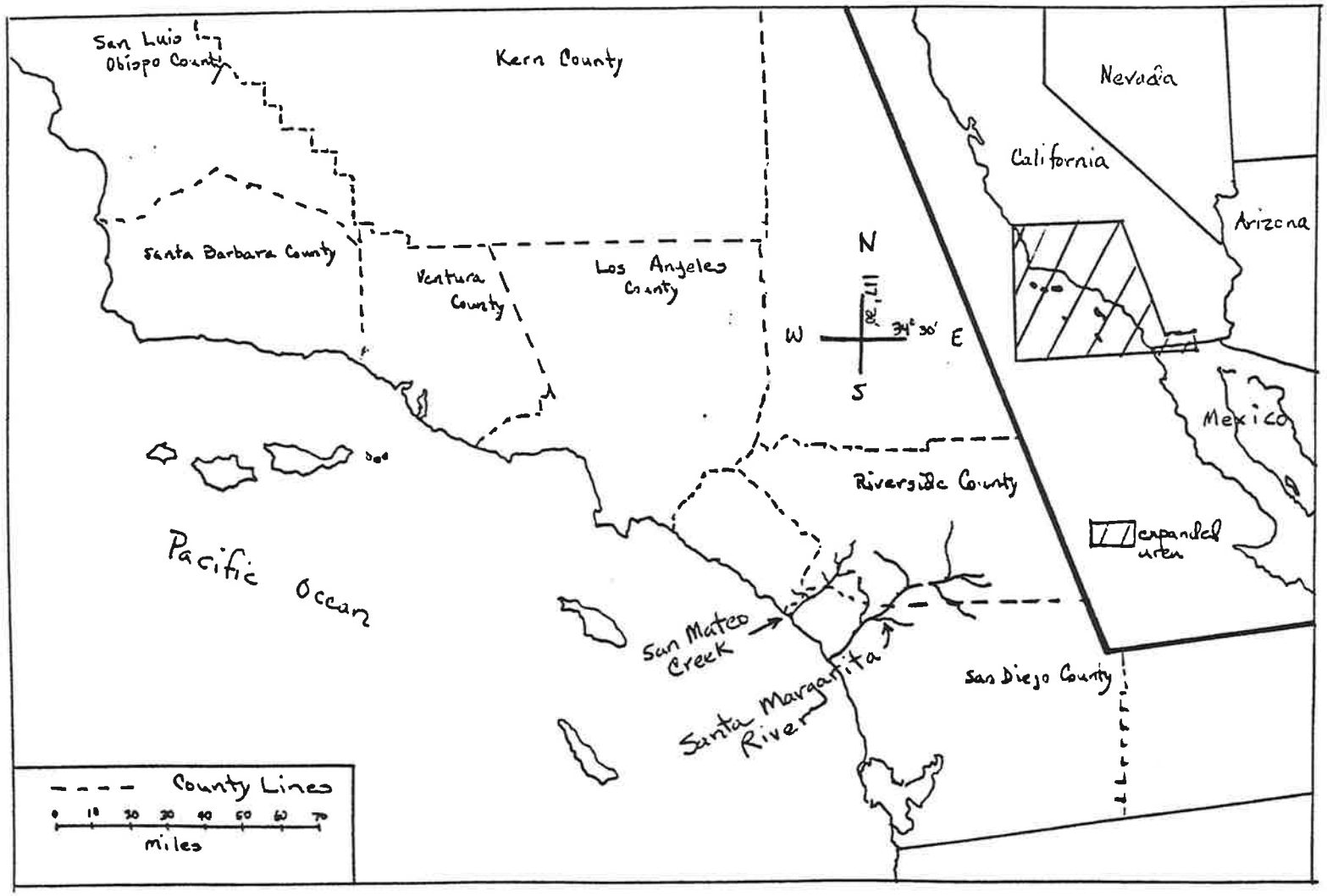

Figure 1: Area map of southern California showing the location of the San Mateo Creek and Santa Margarita River watersheds.

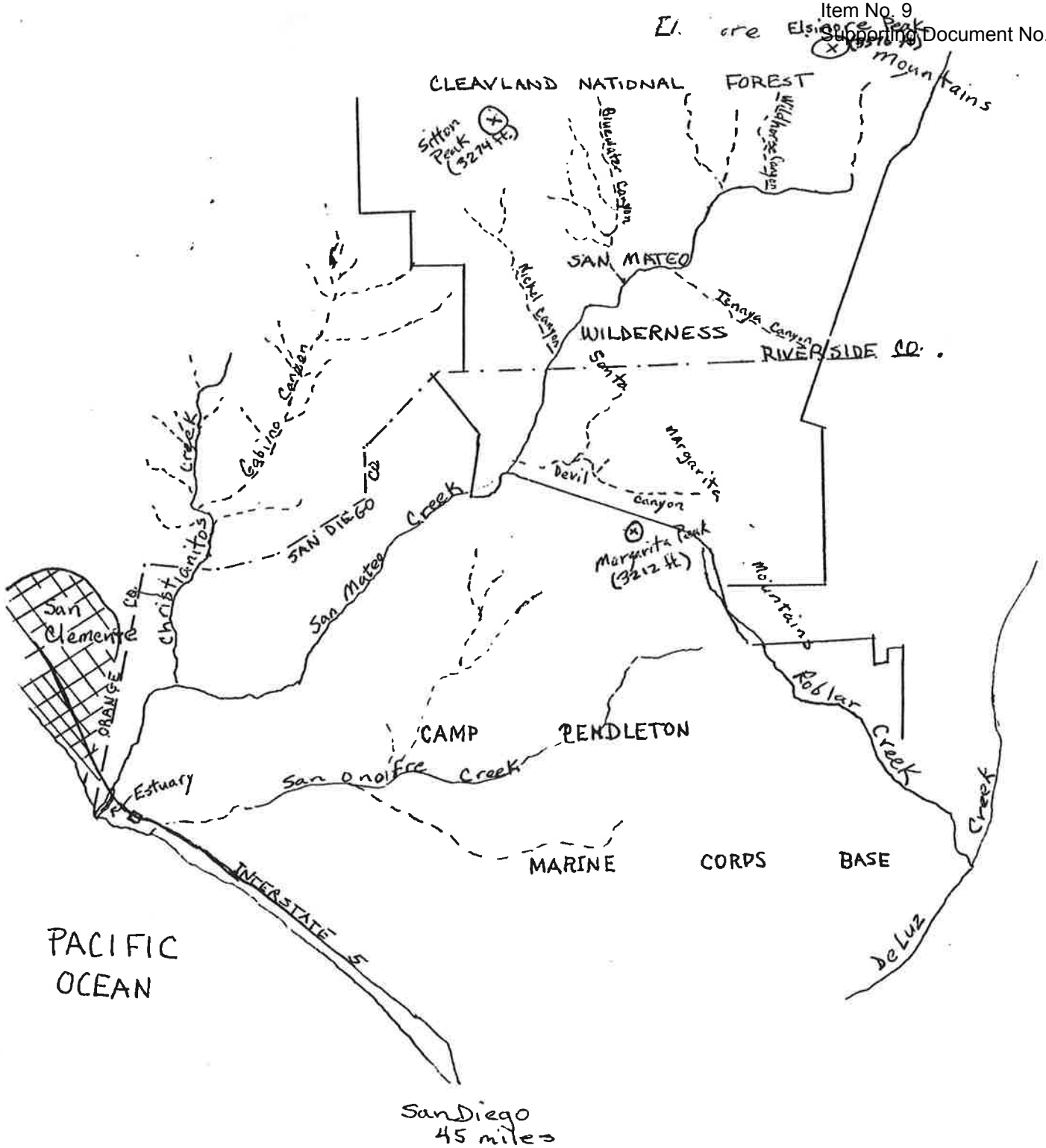

Figure 2: Watershed map of San Mateo Creek showing major tributaries.

alluvial valley may never have been anything more than a corridor through which steelhead passed on their spawning journey or migrations to the ocean. Huge natural sediment contributions may have kept the stream bed in this reach unstable and unsuitable for spawning. Even before the full impact of human activities, the stream went dry in this reach so it may have had limited importance for rearing juveniles as well. Christianitos Creek is a major tributary in the alluvial reach of San Mateo Creek.

Figure 3: Estuary of San Mateo Creek looking upstream towards Interstate 5.

The estuary of San Mateo Creek now extends from just upstream of Interstate 5 about 1/4 mile to the ocean (Figure 3). Surface flows in the creek re-emerge just above the highway bridge in the new San Onofre State Park. Flows into the estuary were greatly diminished after World War II resulting in a significant shrinking of estuarine habitat (Dave Woelfel personal communication). Vegetation has encroached and depth has decreased significantly. The berm at the mouth has built up and no longer allows salt water intrusions. Recent surveys of the estuary by Swift et al. (1989) failed to find any tide water gobies in the San Mateo Creek estuary.

The upper main stem of San Mateo Creek and its major tributaries are steep and rocky. Tributaries in this area include Devils, Wildhorse, Los Alamos, Bluewater, Nickle and Tenaja Canyons. The plunging action of the water has carved pools that provided refuge for steelhead juveniles during summer. A few wider areas in the canyon form depositional areas that were probably important spawning areas for steelhead. Flows in the upper reaches can average over 500 cfs during wet months but may drop to below .5 cfs during summer. During droughts surface flow may cease altogether.

Near the ocean, the hills are covered by grasslands and shrubs characterized as coastal scrub vegetation (Jaeger and Smith 1966). Hills below the canyon area but above the coastal scrub zone are covered by southern oak woodland. Mountain slopes bordering the upper reaches of the stream are covered by chaparral vegetation which is very drought resistant but subject to fires periodically. Tree species along the stream course include cottonwood, willow, sycamore, and alder. Native riparian species in lower gradient reaches near the coast were probably dominated by a variety of willows including, Arroyo willow,
red willow and yellow willow before human caused changes (Mark Capelli personal communication). In the canyon, dominant riparian shrubs are poison oak, wild grape, and wild rose. Riparian vegetation can be very dense along upper sections of the stream but is more sparse in the lower alluvial reach largely due to human impacts. Riparian plants do not form a well defined corridor in this latter reach and tamarisk, a non-native plant, is widespread (Figure 4).

Figure 4: Photo of lower San Mateo Creek in June 1990 showing a poorly defined riparian zone, native trees dying due to depleted ground water and tamarisk, an exotic species (left foreground). Pictured from left to right are Dave Woelfel, George Sutherland (South Coast TU President), and Brian Botham (TU Calif. Council President).

National Forest lands begin about 10.5 miles from the Pacific ocean and most of the watershed above this point is in the San Mateo Creek Wilderness Area. Most of the lower portions of the stream are on Marine Corps Base, Camp Pendleton. The lowest two miles are now leased to the California State Park system to form San Onofre State Park. Farming also occurs in the portions of San Mateo Creek valley near the ocean through leases with Camp Pendleton. Suburban

development from the city of San Clemente encroaches slightly onto the edge of a lower tributary, Christianitos Creek, and ranch development is occurring on the Santa Rosa Plateau area outside National Forest in the upper watershed.

Steelhead: Historical Runs and Stock Characteristics

Runs of steelhead currently enter coastal streams from Alaska to at least as far south as Malibu Creek in Los Angeles County. In the past, steelhead runs are also known to have occurred in the Santa Margarita, San Gabriel, Los Angeles, Santa Ana, San Diego and San Luis Rey Rivers, as well as San Mateo, San Onofre and San Juan Creeks. There are reports from as recently as 1959 of steelhead returning to streams in Baja California (Barnhardt 1986) but whether runs still occur there is unknown.

Past runs of steelhead in San Mateo Creek are well documented (Santa Ana Daily Register 1916, California Department of Fish and Game 1939 and 1950, Hubbs 1946, Woelfel in press). As recently as 1950 (CDFG 1950), numerous steelhead trout were observed. Ulmer and Lattin (1979) reported finding rainbow trout in San Mateo Creek both at lower elevations, from sea level to 760 feet, and in upper reaches between 1800 to 2000 feet. Whether these rainbows were steelhead or planted catchable trout is unknown. No record of stocking is on file either with CDFG or the Camp Pendleton Wildlife Department so circumstantial evidence of natural production of steelhead exists for recent years. Rainbow trout were also found in San Onofre Creek in the 1979 survey by Ulmer and Lattin. Tom Tanaka, who farms lower San Mateo Creek valley, indicated that he caught more than one "trout" of about 18 inches in length after rains in 1986 in lower San Mateo Creek (Woelfel personal communication).

California Department of Fish and Game rescue operations saved 9,800 steelhead juveniles in 1939 from isolated pools in the lower creek. Samples of steelhead trout were collected and positively identified by the University of Michigan in 1939 from San Mateo Creek. The creek was known to produce steelhead of up to 20 pounds (Hubbs 1946) and numerous fish from 7-15 pounds were frequently caught during winter flows (Woelfel in press). Marines rescued many juvenile steelhead from the streams lower reaches when they first assumed control of the area. The Department of Fish and Game thought so highly of the streams potential to produce steelhead that it proposed that the Marines explore establishing a recreational fishery (CDFG memos 1946). Unfortunately, instead land and water use patterns caused almost a complete loss of the steelhead in San Mateo Creek. Woelfel (in press) found no steelhead or rainbow trout during surveys in 1987 or 1988.

Steelhead stocks in the southern extent of their range are not well studied. Salmon and steelhead are generally considered to have strong homing instincts and the only studies on California steelhead confirmed this. Studies on coastal streams only four miles apart near Santa Cruz found straying to be less than 3% (Shapovalov and Taft 1954). Flows have been eliminated from many southern California

coastal streams. If homing was similar to central California steelhead, then remaining populations of southern California steelhead may be founded on the 2-3% of the fish that tended to stray.

Southern California steelhead are reputed to have a very high straying rate but this has never been conclusively documented. Such behavior might have evolved to take advantage of opportunities when insufficient flows were available in natal streams but rainfall was higher in other areas of the coast. Steelhead do have the ability to re-absorb their eggs or milt, however, in years when spawning is not possible which helps them to cope with lack of flows in home streams. Hubbs (1946) stated that cold water temperatures in the ocean off central Baja California, suitable for steelhead ocean feeding, may have led to periodic steelhead migrations to Baja streams. Needham and Guard (1959) suggested that populations of resident rainbow trout in the Santa Domingo River, 150 miles south of Ensenada, were established by steelhead entering the system opportunistically when the river had sufficient flows near the mouth. This hypothesis was never tested, however.

Berg and Gall (1987) found that steelhead from short coastal streams in northern California are genetically similar. Bartley (1987) found the same similarity in coho salmon (Oncorhynchus kisutch) from coastal streams in California. Quinn (1982) suggested that similarity of populations of salmon from small unstable streams may result from a higher rate of straying. Parkinson (1984), however, pointed out that lack of genetic differences in steelhead can also be the result of relatively recent isolation of populations.

Southern races of steelhead may also have evolved a much higher tolerance to warm water temperatures and low dissolved oxygen than is generally thought to be suitable for juvenile salmonids (Greenwood 1988). Marshall (1988) found that steelhead in Malibu Creek were able to withstand very warm stream temperatures. Field reports from San Mateo Creek (CDFG 1950) described various age classes of steelhead juveniles living in pools, isolated by low flows, in water over 70 degrees F. Some of these fish were over 14 inches in length. These larger fish may have resulted from rapid growth associated with high water temperatures (Moore 1980). Since drought conditions had prevailed for three years before the 1950 survey, it is possible that the larger fish may have been three or four year old steelhead juveniles that were unable to migrate out to sea. A small percentage of steelhead offspring will sometimes remain as residents in streams as well. Unfortunately no scale samples were taken to ascertain ages of fish seen. News articles from earlier in the century (Santa Ana Daily Register 1916) described an abundance of "trout" in San Mateo Creek but also noted a high degree of infestation of worms. Warm water conditions may have increased susceptibility to these parasites, yet the fish survived.

Smith (1987) found that juvenile steelhead in central California streams relied heavily on the estuary for rearing habitat. This may also have been the case with southern California steelhead. The importance of estuaries was greater in streams that, like San Mateo

Creek, went dry or experienced severe low flows in their lower reaches. Juveniles experienced their greatest growth rates and Smith (1987) concluded that "a large majority of returning adult steelhead were reared in the estuary" of the streams he studied.

Natural Rates of Erosion

In addition to warm water conditions and low stream flows, steelhead of San Mateo Creek had to cope with very large contributions of sediment from natural sources. Fires occur in the chaparral covered upper watershed on a 10-40 year cycle (Hanes 1977). Soils perched on the steep terrain are subject to serious erosion problems after fires even if high rainfall does not occur (Wells 1987). If high rainfall does occur before ground cover is established, the channel of San Mateo Creek becomes the path for a debris flow (Eaton 1935). The sediment coming off slopes moves rapidly through the steep rocky gorge but remains in residence for long periods in the alluvial reaches.

The first aerial photos taken of lower San Mateo Creek in 1927 show a wide, massively agraded channel with poor riparian vegetation. In March of 1926 nearly 13 inches of rain was measured near the coast, almost the total expected for a whole year. Flood waters may have scoured away the shallow rooted native riparian species. An alternative hypothesis is that the 1926 storms triggered a major movement of sediment into the flood plain of lower San Mateo Creek. It is possible that the high rainfall in 1926 transferred large amounts of sediment already in residence from depositional areas near the mouth of the canyon further downstream causing loss of riparian vegetation and extreme channel widening. A fire had burned in the basin in 1925. Bare slopes in the burned area may have contributed additional sediment during the intense rains adding to the magnitude of bedload movement.

Periodic debris flows may have had severe short term impacts on steelhead populations. High sediment loads can cause loss of adults, juveniles, and eggs or alevins in the gravel. Possible behavior to minimize losses could have included adults avoiding the creek when sediment loads were high and choosing other streams to spawn in, or juveniles moving up tributaries that had not been burned and were less turbid. Salmon and steelhead avoided the Toutle River in Washington when Mt. Saint Helens erupted (Whitman et al. 1982) and spawned in adjacent streams. Sediments deposited in the alluvial reaches of the creek probably made migration for adult and juvenile steelhead more difficult until the stream channel re-established itself several years after such events. Native willow species would have been able to re-stabilize these areas relatively quickly when there was surface flow in the creek or sub-surface flows just under the alluvium.

Human Impacts Causing Loss of Runs

Soon after the Marines opened Camp Pendleton, a community was built near where Christianitos and San Mateo Creeks converge. Pumps were installed to extract ground water for domestic use. Prior to

development of Camp Pendleton, farming took place in lower San Mateo Creek valley, but crops were those which required little water such as lima beans. Access to water from wells drilled by the Marines allowed a change in crops in this area to lettuce, cauliflower, strawberries and other plants which required more water.

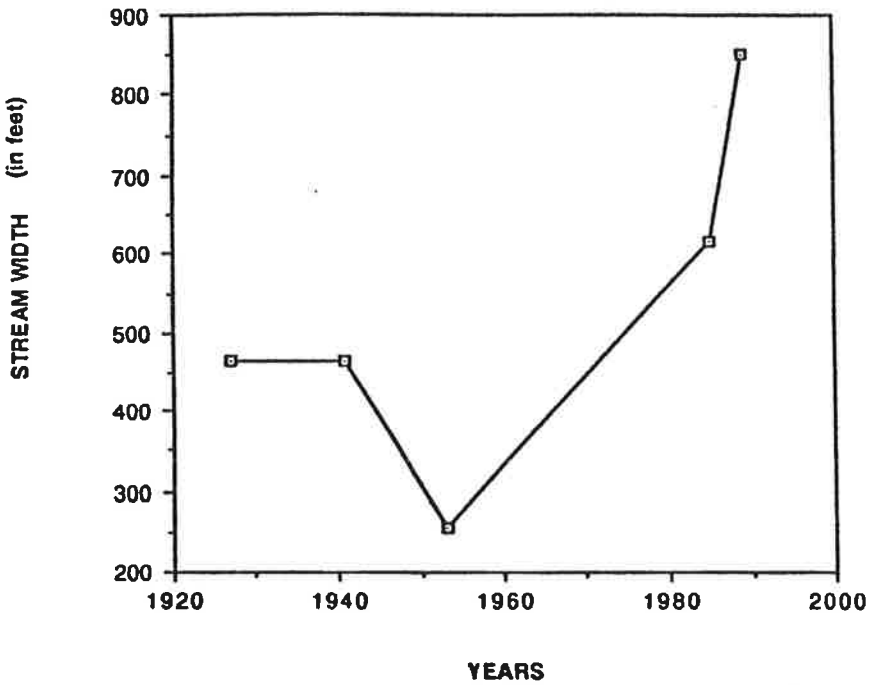

Figure 5. Stream width changes in lower San Mateo Creek valley from 1927-1989 (from Woelfel in press).

Combined water use between the community and agriculture drew down the water table in the lower valley and caused a loss of riparian vegetation. Woelfel (in press) used aerial photos to show a constant deterioration of the lower creek riparian area since 1947. He found channel width to have increased from 464 feet wide to 851 feet in 1989 (Figure 5). Similar problems have been documented on the Carmel River further north on the California coast (Greenwood 1988). As the riparian plants died, the stream channel became shallow and meandering, which increased channel width. Lack of channel definition and decreased flows now cause San Mateo Creek to go under ground in its lower alluvial reaches. This condition has at least contributed to the elimination of steelhead runs. Adults have fewer opportunities to pass upstream and smolts have almost no chance of successfully migrating out of the system. To compound problems berms have been constructed to create spreading basins to increase percolation of stream flows into the ground water.

Military exercises in and around the bed of San Mateo Creek above the residential area but below the National Forest boundary have led to similar problems with loss of riparian vegetation and poor channel definition. Fires related to training exercises have

also been a frequent occurrence leading to increased problems with erosion. Major fires from Marine activity occurred both in 1987 and 1989 and spread into the Cleveland National Forest. Extensive areas of the San Mateo Creek watershed burned. Although rainfall was not intense during the recent winters, deposits of soil and silt 3-4 feet deep were found along the stream banks and deposited in pools in

Figure 6: Dave Woelfel in background inspects sediment deposit in canyon area of San Mateo Creek during June 1990. TU members George Sutherland (left) and Brian Botham (right foreground) are also pictured.

the lower canyon of San Mateo Creek during field investigations conducted for this report. Repeated fires can change vegetation from oak woodland or chaparral to grasslands. These lands are more subject to chronic problems with erosion (Wells 1987).

Green sunfish (Lepomis cyanellus) have been introduced by man into San Mateo Creek. These non-native fish may pose a substantial competition problem for steelhead. While steelhead were able to survive warm water temperatures, they may not fare as well with an exotic warm water adapted species competing with them for food and space. Reeves (1985) found that competition between redside shiners (Richardsonius balteatus) and juvenile steelhead, when water conditions were warm, favored the redside shiner. Later studies inferred that competition between the two was limiting production of steelhead in some Umpqua tributaries (Fontaine 1988).

Estuarine conditions over the years have deteriorated and may have contributed to the loss of steelhead runs. Reduction in flows and increased sediment loads related to loss of channel definition and increased fires have decreased estuarine depth, decreased frequency of sand bar breaching, and probably changed the suitability of the estuary for invertebrates and fishes. Smith (1987) found that available rearing habitat in estuaries of coastal streams was directly related to the amount of fresh water flow into the system.

Swift et al.(1989) documented the disappearance of the tide water goby (Eucyclogobius newberryi) from the San Mateo Creek estuary.

Possible Steps Toward Recovery

Salmon and steelhead populations have adapted to their home stream conditions over evolutionary time (Ricker 1972) Although straying is suspected in southern California steelhead, whether populations remaining in Malibu Creek or other southern California streams would be suited to San Mateo Creek remains unknown. If a Borland Lift is installed on Malibu Creek through the efforts of Cal Trout (Franklin and Dobush 1988), populations may be increased due to increased habitat availability. If population increases were sufficient, it might be possible to get juveniles to plant in San Mateo Creek. The fish pass at Freeman Diversion on the Santa Clara River might also be a site for artificial enhancement efforts and a potential source of young fish (see the last section of this report).

The upper portions of San Mateo Creek are still relatively unaltered and will remain so because they are largely in a wilderness area. The pools in the stream on Cleveland National Forest lands could be used to see if young steelhead transplanted from other southern California streams could survive. If they could, then further efforts to restore runs to San Mateo Creek might be worthwhile.

Removal of green sunfish might be a necessary prerequisite to re-establishing steelhead. When conducting tests of the survival of steelhead juveniles, potential problems with competition between green sunfish and steelhead could be explored. The sunfish could be removed from some pools where the steelhead were planted. The two species could be allowed to compete at another site. Differences in survival or growth of steelhead with and without competition could be tested. If steelhead showed good survival without competition with the green sunfish but poor growth and survival with competition, then efforts to remove green sunfish from all areas of San Mateo Creek would be the next step in a steelhead recovery program. Complete removal of green sunfish might be problematic. Treatment of the entire stream with rotenone would be very expensive. Problems could arise in obtaining permission from the California Department of Fish and Game or the State Water Resources Control Board for such actions.

If appropriate steelhead stocks could be found for restoration efforts and problems with green sunfish effectively dealt with, rectifying problems with migration through the lower reaches of San Mateo Creek would be the next priority. Restoring the riparian vegetation would require a change in land use to either dry land farming, implementation of water conservation measures, or a cessation of farming all together. Domestic water use in the residential area in the valley would also have to be decreased. Additional surface flows would aid migration of adult and juvenile steelhead. The water table would rise which would help to sustain a healthy riparian zone. A well defined riparian corridor would help the channel to scour helping fish passage. Increasing fresh water

flows and decreasing sediment supply will automatically help to reverse problems that have developed in the estuary.

Restoration of the riparian zone would have to take place for almost the entire 10.5 mile portion of San Mateo Creek as it crosses Camp Pendleton (Figure 7). Reconstructing the stream channel with heavy equipment might be necessary to accelerate recovery. Willows

Figure 7: Riparian area of San Mateo Creek below canyon area that is used as a training area for the Marine Corps and that recently burned.

and other native riparian trees and shrubs would have to be planted and irrigated. Tamarisk, a tree of European origin, has invaded riparian areas displacing native species and uses more water than native plants. Tamarisk should be removed from the stream side zone during riparian restoration. Future efforts to eradicate it might also be necessary.

Potential Allies in San Mateo Creek Steelhead Restoration

The U.S. Forest Service is mandated to manage lands under its jurisdiction for multiple use including preserving, enhancing and restoring fish and wildlife resources. Initial efforts by Trout Unlimited to explore the restoration of steelhead in San Mateo Creek have gotten strong support from the Trabuco Ranger District of the Cleveland National Forest. Because San Mateo Creek above Camp Pendleton is largely within the San Mateo Creek Wilderness Area, preservation of much the habitat once inhabited by steelhead is assured. The creek is one of the only relatively undisturbed watersheds remaining in southern California. If TU is able to raise funds for steelhead recovery and begin a program to restore these fish in San Mateo Creek, it is quite likely that the USFS could bring matching resources to help in these efforts.

Marine Corps Base, Camp Pendleton has begun a major program to aid endangered species of birds on lands it controls. Wildlife staff on the base has implemented programs to protect and enhance populations of the least Bell's vireo (Vireo bellii pusillus) and the light-footed clapper rail (Rallus longirostris levipes). A project costing $750,000 is underway to improve the estuary of the Santa Margarita River for bird habitat. Slader Buck, the supervisor of the wildlife branch of the Environmental and Natural Resources Management Office at Camp Pendleton, expressed a willingness to cooperate with TU and others in exploring restoration of steelhead in both San Mateo Creek and the Santa Margarita River. He stated that full cooperation in implementing a recovery program might be more easily procured for restoration efforts directed toward the Santa Margarita River.

In order to test whether appropriately adapted steelhead stocks remain to rebuild populations in San Mateo Creek, fish from Malibu Creek or the Santa Clara River would be needed. Cooperation with Cal Trout would help in the step of obtaining fish. Getting steelhead juveniles to test would require success in Cal Trout efforts to increase runs in Malibu Creek as mentioned above. The California Department of Fish and Game has jurisdiction over all fish and wildlife within the state. Permission from CDFG would have to be received in every phase of restoration efforts. The transporting of any steelhead for tests described above is a decision that ultimately rests with the Department. It may not be possible to get substantial staff support for the project, however, because of budget constraints.

The lowest two miles of San Mateo Creek has recently been leased by the Marine Corps to the California State Parks Department. Some interest has been exhibited on behalf of the Parks Department to include San Mateo Creek estuary in California's Natural Preserve system (Cochrane 1986).

Swift (1990) has recently requested protection under the Endangered Species Act of 1973 (ESA) for the tide water goby. If this species is listed, the U.S. Fish and Wildlife Service would take an active interest in estuarine conditions on lower San Mateo Creek. Listing under California's ESA might increase staff time devoted by CDFG employees as well.

Political Hurdles For San Mateo Creek Steelhead Restoration

Changing existing water and land use in the lower San Mateo Creek may be very difficult politically. Farmers in coastal areas further south on Camp Pendleton were able to bring substantial political pressure on the top staff in 1988 when changes in leases were being contemplated (San Diego Times 9/19/88). The Marine Corps yielded to these pressures and changed plans to construct housing that would have displaced an area used to grow potatoes. Similar pressures could be anticipated if Camp Pendleton attempted to halt or substantially change farming activities along lower San Mateo Creek.

Although the Marine Corps has been increasingly supportive of efforts to protect and enhance wildlife species on Camp Pendleton, they could be expected to resist some changes necessary for restoring steelhead to San Mateo Creek. The wells that draw water in the basin are currently the only possible source for the northern residential area on Camp Pendleton. The primary use of the base is for military exercises so any projects that restrict such activities along San Mateo Creek might not meet with acceptance of top staff officers.

Restoring steelhead to San Mateo Creek would take a large amount of capitol. In the current budget squeeze in California and with massive problems with the federal deficit, getting sufficient resources to attempt the ambitious steelhead restoration program in San Mateo Creek must also be considered a formidable political obstacle.

Conclusion

While immediate undertaking of efforts to restore steelhead in San Mateo Creek may be overly ambitious, attempting such a project in the future may be worthwhile. Although the political obstacles to restoring steelhead mentioned above are real, one must remember that the political climate is always changing. A majority of people in the United States are concerned with deteriorating environmental quality. The rapid growth in southern California over the last several decades may spawn a strong conservation movement to preserve some natural areas before it is too late.

San Mateo Creek offers one of the few opportunities remaining in southern California to restore an island of ecological integrity. The area could serve as an ideal preserve for flora and fauna, allow an ideal environment for study, and act as a place for people to go in southern California and be part of nature with the full complement of native species still present. Ideally this would include native stocks of steelhead trout.

Marine Corps Base, Camp Pendleton is currently negotiating with the Tri-City Water District and San Clemente to use the lower San Mateo Creek aquifer as a water bank. By injecting water from outside the basin into the water table for storage, some of the problems hindering survival of riparian vegetation may be answered. The Los Angeles Municipal Water District has studied using areas near the shore on Camp Pendleton as the site of a desalination facility (San Diego Times 1988). If water from this facility was available for use by the base, some objections to steelhead restoration on San Mateo Creek might be taken care of. Exploration of a desalination plant is not being actively pursued at present on the base (Slader Buck personal communication).

If the southern California race of steelhead were listed as threatened or endangered under the ESA, substantial resources from many agencies of the state and federal government could be accrued. Listing of the tide water goby has already been requested and is under consideration by USFWS (Swift 1990). Improvements in estuarine

conditions may require several steps that would also be prerequisites for steelhead recovery. The Environmental and Natural Resources Management Office at Camp Pendleton would have greater likelihood of funding from Marine Corps Headquarters for fisheries if listing of the tide water goby occurred, at least in estuarine environments. Programs dealing with endangered fish in the Southwest have included restoring populations that have been lost completely by finding appropriate stocks from other areas.

While it may be premature to begin a major steelhead restoration project immediately, it is not too soon to start to build a constituency to support steelhead restoration. Development interests also have plans for Camp Pendleton including golf courses, airports and freeways. If the option to restore steelhead is to remain open, a coalition of conservationists should be formed to keep preserving natural resource values on Camp Pendleton as a priority.

SANTA MARGARITA RIVER

Study Site

The Santa Margarita River flows into the Pacific Ocean just north of Oceanside in San Diego County. The watershed is substantially larger than that of San Mateo Creek, covering 740 square miles, and extends into Riverside County in its upper reaches (Figure 8). Two major impoundments have been constructed on upper tributaries; Lake Skinner, which controls water from 319 square miles (43% of total area) and Vail Lake which retains flow from 51 square miles (6%). Most of the water from Lake Skinner is used for agricultural and domestic uses, greatly reducing stream flows from historic levels. The lower sections of the Santa Margarita cross Camp Pendleton and the Marine base draws water for domestic use for its largest residential area. Much of the flow of the river is diverted into Lake O'Neill on the base for use but flows are also released to recharge ground water during the driest times of year.

The Santa Margarita River could be divided into three major reaches. A flat alluvial reach extends from the mouth of the river to approximately the mouth of De Luz Creek. The next fourteen miles of stream flow through a canyon to an area upstream near the convergence of Temecula and Murietta Creeks (Figure 9). These two latter tributaries constitute the upper reach and are low gradient and flow through rolling hills. Field explorations were carried out in the lower river and canyon reach, but excluded the Temecula and Murietta watershed areas. Other major tributaries include De Luz Creek, Sandia Creek, Fallbrook Creek, and Rainbow Creek. Fallbrook Creek flows into Lake O'Neill.

Flows vary substantially with the season. Near Temecula stream flows fluctuate from a low in October of 1.8 cubic feet per second (cfs) but increase to an average of 196 cfs in February. Low flow at Fallbrook averages 4 cfs in October with maximum average flows

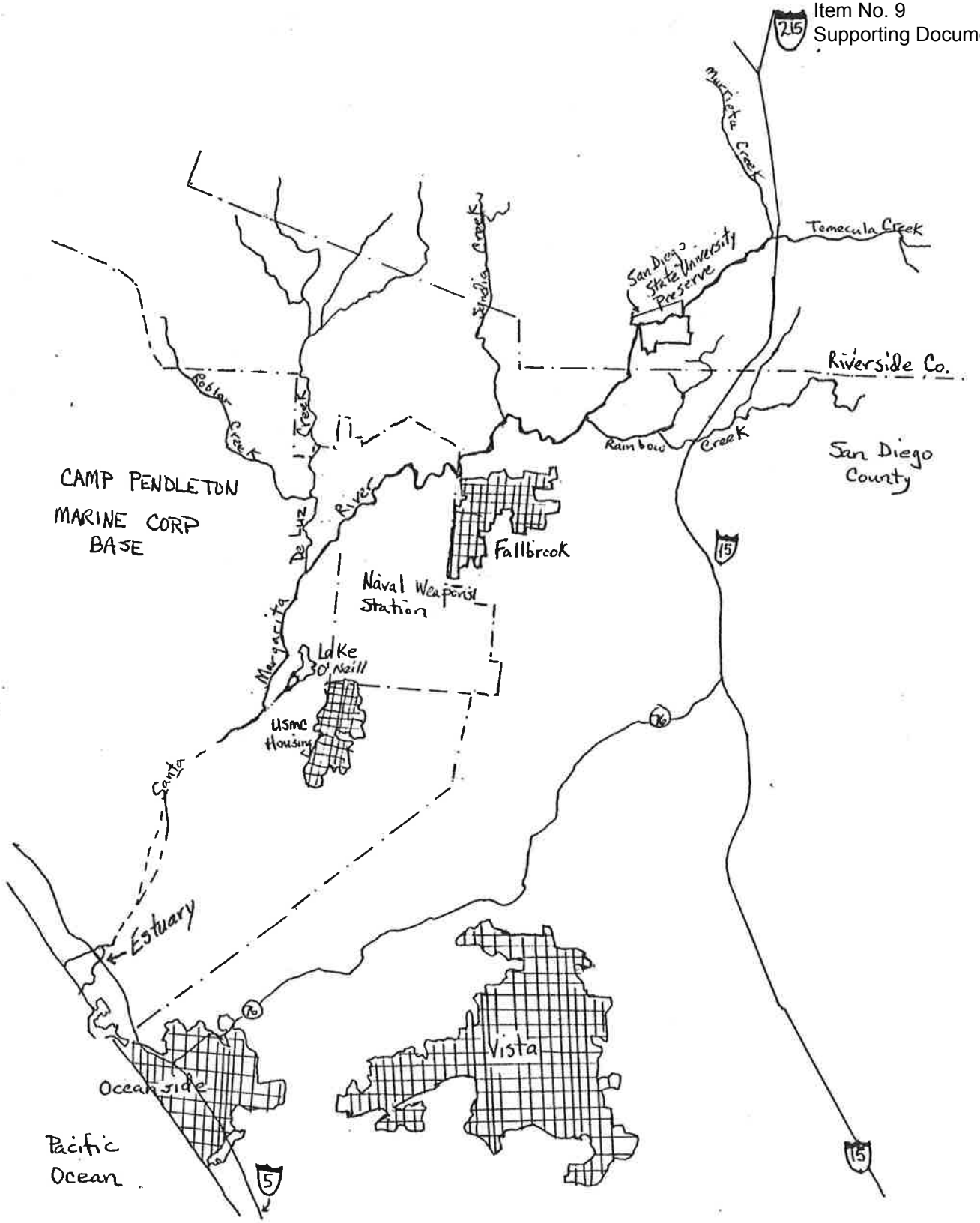

Figure 9: Lower Santa Margarita River watershed area map showing major tributaries.

Figure 9: TU member Brian Botham next to the Santa Margarita River in canyon reach at the San Diego State Ecological Reserve.

occurring in February at 391 cfs. Flows near the mouth have been dry for several months out of the year as a result of diversion and spreading which is done to recharge ground water. Lack of rainfall in recent years has contributed to lack of surface flows in the lower Santa Margarita in recent years (Slader Buck personal communication). Flows in February near the mouth average 477 cfs. Maximum discharge at flood near the mouth has been measured at 18,000 cfs (USBR 1984). (Much of the background information on the Santa Margarita River in this report was taken from the 1984 Draft Environmental Impact Statement for the Bureau of Reclamation Santa Margarita Project).

Problems Causing Loss of Steelhead Runs and Impediments to Recovery

Steelhead may have been returning to the Santa Margarita River as recently as the late 1970's (Swift 1975). In 1980 Camp Pendleton increased the size of the structure that diverts much of the rivers flow into Lake O'Neill. Because of the increased height, migration of adult steelhead was probably blocked (Figure 10). Since no spawning habitat exists below the dam, no chance for survival of steelhead remained. Increasing demands for water due to developement in the upper watershed area has also decreased flows and undoubtedly contributed to the decline of steelhead runs.

Water quality in the Santa Margarita deteriorated considerably between 1970 and 1980 (SWRCB 1981). Turbidity levels are quite high with visibility rarely exceeding three feet. The problem stems from non-point source pollution from agriculture and suburban

Figure 10: Brian Botham inspecting structure that to diverts water into Lake O'Neill and blocks migration of steelhead.

development, Colorado River water of poorer quality imported into the basin, and disposal of wastewater from municipal and agricultural sources. Algal blooms are common in quieter stretches of water during summer months (USBR 1984). Reduced flows may have contributed to warming of the river's water and helped promote the blooms. Low abundance and diversity of aquatic invertebrates during field reconnaissance for this report during June of 1990 may also be indicative of low dissolved oxygen or problems with water pollution.

The bed of the Santa Margarita River is almost completely sand except in bed rock or boulder strewn areas in the canyon reach. Even interstitial space between boulders in more rapid or confined areas is choked with sand. Decomposed granitic soils in the Sandia Creek watershed and on hills surrounding the Santa Margarita River canyon naturally contribute sand to the river. Disturbance of hillsides associated with avocado farming may have increased erosion rates. Widespread development in the Murietta and Temecula Creek basins has certainly contributed sediment to the river. Reduced flows because of the impoundments have also reduced the ability of the river to flush itself.

Below the diversion for Lake O'Neill, the Santa Margarita has some excellent riparian habitat which now harbors over 45% of the population of the least Bells vireo (Slader Buck personal communication). Because flows have been low or intermittent, however, the stream channel may be poorly defined and might pose problems to migration of steelhead if they were reintroduced. The giant reed or bamboo (Arundo donax) is an aggressive species that has colonized wet areas near the lower river and could choke the stream channel if not controlled. The increases in sediment and decreased flows have greatly reduced the depth and area of the estuary of the Santa Margarita River which can be important rearing habitat for juvenile steelhead (Smith 1987).

Beaver (Castor canadensis) were introduced into the Santa Margarita basin and have altered the stream considerably. Beaver dams form pools in much of the reach flowing through the canyon area. These dams could potentially form barriers to upstream and downstream migration of steelhead trout. Beaver ponds also increase thermal problems and promote algal blooms. In tributaries beaver may remove willows which may not grow back in the hot, dry, draws of chaparral covered hills (personal communication Slader Buck).

A number of species of fish have been introduced into the Santa Margarita River (USBR 1984) including green sunfish, blue gill (Lepomis macrochirus), black bullhead (Ictalurus melas), and red eye bass (Micropterus coosae). Grass carp (Cyprinus carpio) were illegally stocked into O'Neill Reservoir in 1989 (Slader Buck personal communication). Problems for steelhead could result from competition as described above for San Mateo Creek. Rainbow trout were planted by the California Department of Fish and Game as recently as 1984 but continuing survival of these fish is not in evidence.

Possibilities For Restoring Steelhead Runs

Passage problems through lower areas of the Santa Margarita River are different than those on San Mateo Creek. The water table in the river's lower reach is not drawn down to the same extent as that of San Mateo Creek. Lack of consistent flow has caused the channel to be poorly defined in some areas and fish passage might be blocked by dense vegetation. Over time, simply increasing flows might help to open the channel but extensive labor might be required if short term results were desired. Removal of the giant reed might be desirable but native species planted in their place would require less irrigation than on the San Mateo Creek flood plain. Further restoring the stream channel and riparian vegetation would also have beneficial effects for bird species.

An obvious priority of any recovery efforts for steelhead restoration on the Santa Margarita is the construction of a ladder over the structure that diverts water to Lake O'Neill. Two tributaries of the Santa Margarita River may have suitable conditions to support steelhead at present. Roblar Creek, a tributary to De Luz Creek, has perennial water and flows over bedrock and gravel (USBR 1984). The stream has many cascades which should help keep the water well oxygenated. Because Roblar Creek is less than 12 miles from the ocean, passage over the dam near Lake O'Neill for adults and remedies for down stream migration for juveniles might be the only measures necessary to re-establish steelhead in this tributary. It should be mentioned that Deluz Creek which links the Santa Margarita River and Roblar Creek has rarely flowed in the last several years due to drought conditions.

Rainbow Creek near the town of Fallbrook has perennial flow also and a cobble and gravel bed possibly suitable for spawning and rearing of salmonids. This tributary is approximately 18 miles from the ocean. Measures to restore migratory access for steelhead to

Roblar Creek might also allow fish passage to Rainbow Creek. The same considerations for testing whether appropriate stocks existed for restoring runs in San Mateo Creek would be advisable for both creeks in the Santa Margarita drainage. Field work would be necessary to find out if exotic species had invaded these two streams. Additional steps in recovery similar to those described above for San Mateo Creek might then be necessary.

Current efforts to increase estuarine habitat for birds and future efforts directed at protecting and enhancing habitat for the tide water goby might also be important steps toward steelhead recovery as the estuary can be very important rearing habitat (Smith 1987).

Potential Allies in Restoring Steelhead to the Santa Margarita

Camp Pendleton Natural Resource Supervisor Slader Buck recommended including steelhead restoration on the Santa Margarita River in the Embrace-A-Stream study. The base has an interest in protecting its water quality which has experienced a consistent decline in recent years. If fisheries restoration were made a priority in the Santa Margarita River basin, more leverage might be available to help abate water quality problems. Camp Pendleton has considerable staff and money directed at restoring wildlife in the Santa Margarita basin. Fisheries restoration might dovetail well with these efforts. Riparian areas restored to allow for steelhead migration might serve as ideal habitat for the least Bell's vireo. Roblar Creek and the lower river are within the boundaries of Camp Pendleton, so efforts to restore fish passage to this tributary would be largely under the jurisdiction of the base.

The Bureau of Land Management controls some land along the Santa Margarita in the canyon reach and has recently proposed Wild and Scenic designation for part of the river. Such a designation might help with protection of the river and help spur efforts to reverse declines in water quality. Steelhead restoration might be facilitated by designation of the Santa Margarita as Wild and Scenic.

California State University at San Diego has a research natural area in the canyon reach of the Santa Margarita River. It is possible that the University might find students interested in the historic use of the river by steelhead, current water quality conditions, aquatic insect communities, and other things having bearing on restoring steelhead to the Santa Margarita River.

A conservation group called Friends of Santa Margarita became active several years ago to stop proposed dams on the Santa Margarita River near De Luz Creek and near Fallbrook. This active group of local conservationists could be allies with Trout Unlimited in building a support base for steelhead restoration efforts.

As in prospective restoration activities on San Mateo Creek, all efforts to restore steelhead would need prior approval of the California Department of Fish and Game. Also listing for the tide water goby under the ESA may trigger additional staff support from both CDFG and USFWS for efforts to restore the estuary of the Santa Margarita.

Conclusion

Because there are two tributaries that seem to be suitable for spawning and rearing of steelhead, Roblar and Rainbow Creeks, restoration efforts in the Santa Margarita River might be attainable. The problems of the main Santa Margarita River in its upper reaches from development are very complex and difficult to deal with. Problems in the lower river may be remediable. Further studies on habitat suitability of Roblar Creek in conjunction with Camp Pendleton may be possible. Rainbow Creek explorations might be coordinated by Trout Unlimited with local support from conservationists such as the Friends of the Santa Margarita, Trout Unlimited members, or other interested parties. Having science students at the high school level participate in such studies might also be a possibility. If some foot hold were gained by restoring steelhead in the two creeks mentioned above, then the larger problems in the basin might be attacked incrementally.

A ROLE FOR TU IN SOUTHERN CALIFORNIA STEELHEAD RECOVERY

If steelhead are to be restored to either San Mateo Creek or the Santa Margarita River, appropriately adapted steelhead stocks must be used. Current population levels in other southern California streams would probably need to be increased before they could be safely handled and serve as founding broodstock for recovery efforts. Therefore, the first step in any restoration efforts is helping to build a constituency to protect and enhance remaining runs of southern California steelhead. There is a critical need for information on what creeks south of Santa Barbara still harbor steelhead, what population levels are, and what further steps are needed to protect them.

Three streams are known to harbor at least remnant runs of steelhead along the state's south coast. Studies on Malibu Creek (Franklin and Dobush 1988) indicate that a viable population continues to exist there. An average of sixty adults are estimated to use the creek annually (Jim Edmundsen personal communication). The efforts of California Trout on Malibu Creek have been very successful in focusing attention on steelhead in southern California. Increased flows from the Tapia Water Reclamation Facility have prevented Malibu Creek from drying up since the late 1960's (Franklin and Dobush 1988). Since this is one of the few streams with consistent flow, the additional water may have attracted remnant southern California steelhead stocks that had used other streams. Thus, Malibu Creek may represent a genetic repository of locally adapted steelhead for the region. If fish pass facilities are installed at Ringe Dam through

Cal Trout efforts, increased habitat may allow population increases. If larger stable populations were achieved, these fish might then serve as seed stock for other recovery efforts in the area.

The Ventura River probably has the largest remaining population of steelhead in southern California. Steelhead population estimates in 1946 (Clanton and Jarvis) were between 4000-5000 adults returning to in the Ventura River. Today 200 fish are estimated to use the river in years of adequate flow (Moore 1980). The Ventura, despite greatly reduced flow, is one of the last streams supporting these fish in the region. The Friends of the Ventura River have helped protect this remnant population and have been adamant in their fight to maintain a fishery.

The Santa Clara River also has steelhead returning to it (Swift 1975). Sespe Creek flowing from the National Condor Sanctuary is undisturbed steelhead habitat. Steep canyons, carved in various types of sandstone, shade deep pools harboring rainbow trout and/or steelhead juveniles. The only way to gain access to the length of the creek is to float through the gorge. Rattlesnakes are prevalent in areas adjacent to the creek. The Sespe Flyfishers have shown interest in helping maintain this population. The group Keep Sespe Wild has been trying to attain Wild and Scenic status for Sespe Creek under the U.S. Wild and Scenic Rivers Act. Installation of a fish pass by a Freeman Diversion was recently completed in the lower river to allow passage of adults and juvenile steelhead at a cost of $1.4 million (Brooks Harper personal communication). This fish ladder might also allow an opportunity for artificial culture to help increase populations. This latter course may not be appropriate at extremely low population levels. Recovery of this steelhead population has the interesting link to our most famous endangered species: the California condor. Will southern California steelhead share a similar fate?

Conclusion

In January of 1991, Trout Unlimited will be represented at a meeting to more clearly define what southern California steelhead populations remain, what measures are needed for their immediate protection, and what are some prospects for restoration. Key players from all groups and agencies with an interest in saving these fish will be present. After gaining a full understanding of what actions are currently being taken and by whom to help the fish, an appropriate role for TU may emerge.

TU has members in all areas of California's south coast and they may wish to become active on behalf of TU to help in efforts already initiated by other groups. Cal Trout's efforts on Malibu Creek have the most momentum and could be a cornerstone for further restoration efforts. Local activists for TU could write articles for Salmo West, the newsletter of the California Council, to inform California's 6,000 TU members. Helping other groups gain recognition and support for local protection and restoration efforts would also be an aid to building a wider constituency outside angling groups for southern California steelhead recovery.

If the California Council of TU achieves its goal of hiring staff, TU could supply technical support for local grass roots groups. Activities for these groups might include assessment of small streams for use by steelhead, juvenile counts in Sespe Creek, adult counts at the fish pass on the Santa Clara River, or other measures deemed appropriate.

The southern California steelhead population is definitely at risk of extinction. Including them on the federal list of endangered species might allow more resources to be allocated to their protection and recovery. Requesting listing of southern California steelhead as threatened or endangered must be an option considered by TU and all groups concerned. A threatened listing would allow greater flexibility in restoration efforts and might allow for some fishing. By listing these remnant populations as endangered, angling would be disallowed. Support groups that have been interested in angling opportunities might be lost if this were the case.

If a threatened or endangered listing is pursued, efforts must begin immediately to inform the public as to the need for such actions to avoid the possibility of a political backlash. By increasing public awareness, there may be a change in the political climate and decision making process regarding protection of steelhead without listing. Consequently, all groups including TU must do whatever possible to help people understand the plight of steelhead in their southern range. Other populations of anadromous salmonids in California such as spring chinook and coho may also be considered for listing under the ESA, so education on southern steelhead will help the public understand the problems populations of these fish throughout California.

In helping to build a broader constituency in the wider area of southern California from angling groups and conservation organizations, the fight to save southern California steelhead may be won. If populations are stabilized and rebuilt in their current range, then the more ambitious projects such as restoration in San Mateo Creek and the Santa Margarita River can then be pursued. The ability of these magnificent fish, more at home in times of glaciers, to adapt and survive as climates have changed over time in southern California is truly amazing. Southern California steelhead may ultimately be saved for their symbolic importance and as environmental quality indicators rather than for their value as sport fish.

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EXHIBIT 16

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The urban stream syndrome: current knowledge and the search for a cure

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Abstract. The term "urban stream syndrome" describes the consistently observed ecological degradation of streams draining urban land. This paper reviews recent literature to describe symptoms of the syndrome, explores mechanisms driving the syndrome, and identifies appropriate goals and methods for ecological restoration of urban streams. Symptoms of the urban stream syndrome include a flashier hydrograph, elevated concentrations of nutrients and contaminants, altered channel morphology, and reduced biotic richness, with increased dominance of tolerant species. More research is needed before generalizations can be made about urban effects on stream ecosystem processes, but reduced nutrient uptake has been consistently reported. The mechanisms driving the syndrome are complex and interactive, but most impacts can be ascribed to a few major large-scale sources, primarily urban stormwater runoff delivered to streams by hydraulically efficient drainage systems. Other stressors, such as combined or sanitary sewer overflows, wastewater treatment plant effluents, and legacy pollutants (long-lived pollutants from earlier land uses) can obscure the effects of stormwater runoff. Most research on urban impacts to streams has concentrated on correlations between instream ecological metrics and total catchment imperviousness. Recent research shows that some of the variance in such relationships can be explained by the distance between the stream reach and urban land, or by the hydraulic efficiency of stormwater drainage. The mechanisms behind such patterns require experimentation at the catchment scale to identify the best management approaches to conservation and restoration of streams in urban catchments. Remediation of stormwater impacts is most likely to be achieved through widespread application of innovative approaches to drainage design. Because humans dominate urban ecosystems, research on urban stream ecology will require a broadening of stream ecological research to integrate with social, behavioral, and economic research.

Key words: urbanization, streams, stormwater management, water quality, hydrology, ecosystem processes, imperviousness, restoration, urban ecology.

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Increasing urbanization across landscapes of the world has led to increased research on ecology in urban settings in the last 1 to 2 decades. Urban ecological studies have investigated both impacts of urban development on native ecosystems and the dynamics of urban environments themselves as ecosystems (Grimm et al. 2000). In both areas of research, streams of urban areas have an important part to play because their position in the landscape makes these ecosystems particularly vulnerable to impacts associated with landcover change. Furthermore, streams feature strongly in dynamics of urban ecosystems themselves as 1) habitats for a potentially diverse and productive biota, 2) carriers of water and processors of the materials in that water, and 3) important social and cultural foci for the human inhabitants of their catchments.

Changes to stream ecosystems wrought by urban land use have previously been reviewed (Suren 2000, Paul and Meyer 2001, Center for Watershed Protection 2003), but the new contributions in this series of J-NABS papers provide an opportunity for a new synthesis and re-evaluation of the links between urban land use and stream ecological structure and function. The papers in this series, and other recent papers, document the many ways in which streams draining urbanized catchments are ecologically degraded: a consistent suite of effects termed the "urban stream syndrome" by Meyer et al. (2005). We summarize symptoms of this syndrome from papers in this issue and from other recent studies, primarily from the US and Australia. Our aim is to clarify which symptoms show consistent trends across geographic regions and which require further study before conclusions and/or generalizations may be drawn. We also use papers from this series and elsewhere to identify mechanisms that may drive the symptoms of the urban stream syndrome, with the aim of identifying the best management actions to conserve streams in less-urbanized yet vulnerable catchments, and possibly to restore streams in existing urban catchments to an ecological condition more closely resembling streams not affected by urban land use.

A critical factor in restoration and conservation of urban streams and their catchments is the human population (Booth 2005), suggesting that effective management of these streams will require a broader perspective than traditional stream ecology, one that includes social, economic, and political dimensions. We present a broad framework for the study of urban streams more akin to the concepts of urban ecology (Grimm et al. 2000).

Our paper addresses the following questions:

1) Which of the reported symptoms of the urban stream syndrome show consistent patterns in urban areas, and which require more study before generalizations about conditions or effects can be made?
2) Which mechanisms drive the symptoms of the urban stream syndrome and what approaches should be used to further our understanding of these mechanisms?
3) What are appropriate goals for ecological restoration of streams in urban areas and what actions are required to achieve these goals?

The Urban Stream Syndrome

Consistent symptoms of the urban stream syndrome include a flashier hydrograph, elevated concentrations of nutrients and contaminants, altered channel morphology and stability, and reduced biotic richness, with increased dominance of tolerant species (Paul and Meyer 2001, Meyer et al. 2005). These ecological effects often are accompanied by other symptoms not observed in all urban areas, such as reduced baseflow or increased suspended solids (Table 1, Fig. 1, and see below). Symptoms that do show consistent increases or decreases with urban land use may still vary between cities in the degree to which they change and in the level of urbanization at which a change in the symptom is observed. Identifying factors that drive such differences between cities may help in the search for strategies to alleviate the syndrome.

Physicochemical processes

Hydrologic change.—Changes to hydrographs are perhaps the most obvious and consistent changes to stream ecosystems influenced by urban land use, with urban streams tending to be more "flashy", i.e., they have more frequent, larger flow events with faster ascending and de-

TABLE 1. Symptoms generally associated with the urban stream syndrome. Consistent response are those observed in multiple studies, whereas inconsistent responses are those that have been observed to increase (↑), decrease (↓), and/or remain unchanged with increased urbanization. Limited research implies the need for more studies before concluding whether responses are consistent or inconsistent.

Feature	Consistent response	Inconsistent response	Limited research
Hydrology	↑ Frequency of overland flow ↑ Frequency of erosive flow ↑ Magnitude of high flow ↓ Lag time to peak flow ↑ Rise and fall of storm hydrograph	Baseflow magnitude	
Water chemistry	↑ Nutrients (N, P) ↑ Toxicants ↑ Temperature	Suspended sediments	
Channel morphology	↑ Channel width ↑ Pool depth ↑ Scour ↓ Channel complexity	Sedimentation	
Organic matter	↓ Retention	Standing stock/inputs	
Fishes	↓ Sensitive fishes	Tolerant fishes Fish abundance/biomass	
Invertebrates	↑ Tolerant invertebrates ↓ Sensitive invertebrates		Secondary production
Algae	↑ Eutrophic diatoms ↓ Oligotrophic diatoms	Algal biomass	
Ecosystem processes	↓ Nutrient uptake	Leaf breakdown	Net ecosystem metabolism Nutrient retention P:R ratio

scending limbs of the hydrograph. The primary driver of these changes occurs from a combined effect of increased areas of impervious surfaces and more efficient transport of runoff from impervious surfaces by piped stormwater drainage systems (Dunne and Leopold 1978, Fig. 1). Total catchment imperviousness (TI) has commonly been used as an indicator of this class of hydrologic change, although the influence of TI on stream hydrographs varies substantially with permeability of pervious parts of the catchment (Booth et al. 2004) and with how much of the impervious area drains directly to streams through pipes rather than draining to the surrounding pervious land (Walsh et al. 2005).

Increased flashiness is a useful descriptor for hydrologic effects of urban land use, but differences exist in how scientists have measured this effect. Konrad and Booth (2002) proposed a hydrologic metric (T_{Qmean}) as a predictor of urban-related stream degradation (see also Booth 2005). This metric quantifies the proportion of

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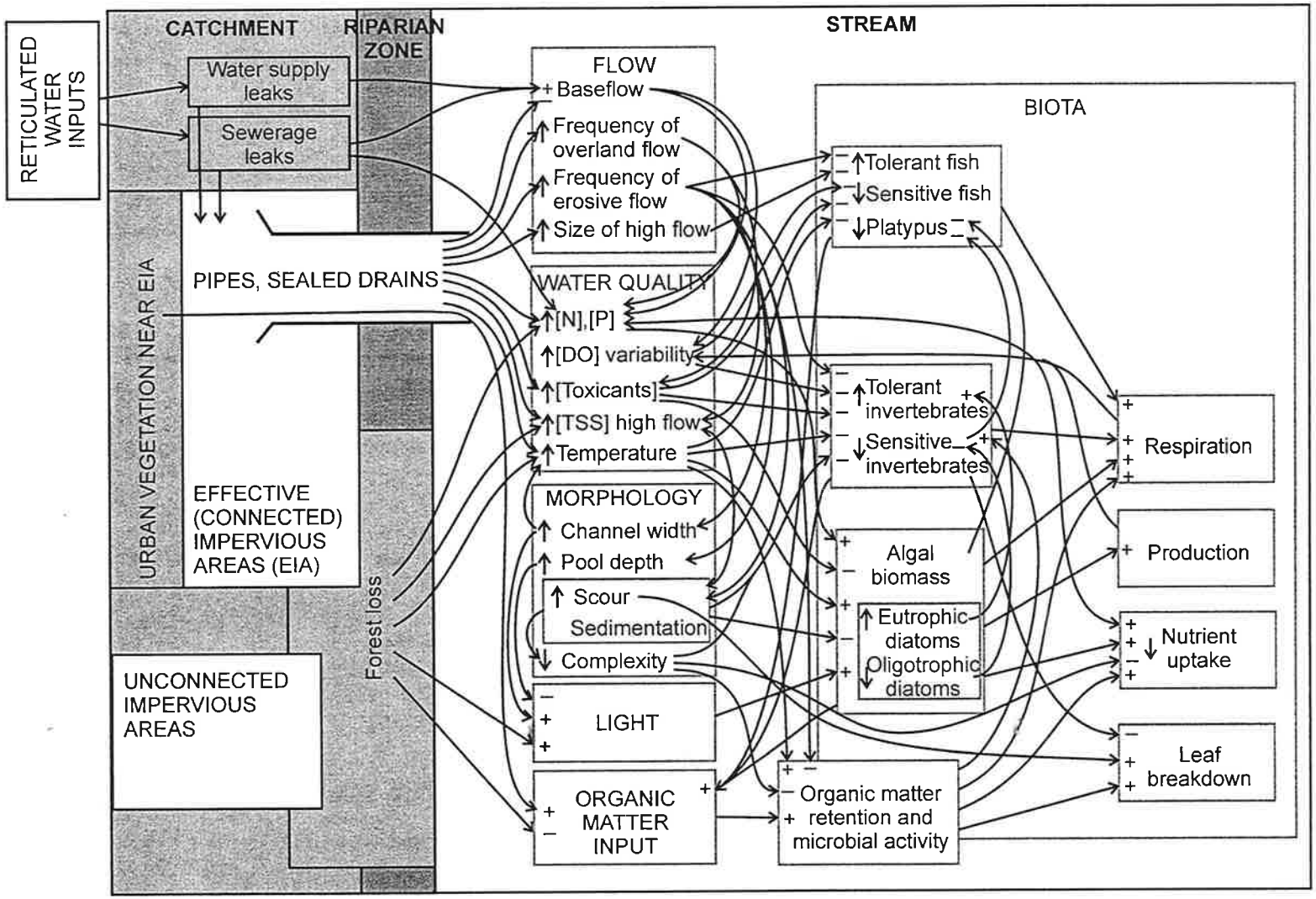
FIG. 1. Conceptual model of mechanisms of the major urban impacts on stream ecosystems. Impacts are many and interactions are complex, but most changes are driven by stormwater runoff from impervious surfaces delivered through pipes and sealed drains. Impacts of the loss of riparian forest (dark shading) are comparatively fewer and less severe than impacts of effective impervious areas. Landuse changes, such as forestland conversion, construction of impervious surfaces, or leakage of reticulated water systems are hypothesized to have little or no impact on receiving streams if they are buffered by pervious surfaces (light and dark shading). Trends consistently observed in urban areas within boxes on the right half of the figure are indicated by vertical arrows, whereas attributes showing different trends among urban areas are drawn without vertical arrows. Arrows linking attributes indicate hypothesized causal relationships, and the direction of the effect is indicated by + or −.


RETICULATED WATER INPUTS
CATCHMENT
RIPARIAN ZONE
STREAM
Water supply leaks
Sewerage leaks
PIPES, SEALED DRAINS
URBAN VEGETATION NEAR EIA
EFFECTIVE (CONNECTED) IMPERVIOUS AREAS (EIA)
UNCONNECTED IMPERVIOUS AREAS
Forest loss
FLOW
Baseflow
Frequency of overland flow
Frequency of erosive flow
Size of high flow
WATER QUALITY
[N],[P]
[DO] variability
[Toxicants]
[TSS] high flow
Temperature
MORPHOLOGY
Channel width
Pool depth
Scour
Sedimentation
Complexity
LIGHT
ORGANIC MATTER INPUT
BIOTA
Tolerant fish
Sensitive fish
Platypus
Tolerant invertebrates
Sensitive invertebrates
Algal biomass
Eutrophic diatoms
Oligotrophic diatoms
Organic matter retention and microbial activity
Respiration
Production
Nutrient uptake
Leaf breakdown

time mean discharge is exceeded, and also captures the increased frequency of high flows identified by Roy et al. (2005) and Walsh et al. (2005) to exert a strong ecological effect. In Fig. 1, we describe this aspect of flashiness as the increased frequency of erosive flows large enough to cause hydraulic disturbance to biota (Booth 2005, Roy et al. 2005), and that are also likely to cause channel incision and bank erosion (MacRae and Rowney 1992, and see below). Walsh et al. (2005) identified the increased frequency of smaller, overland flow events as another aspect of flashiness to be of potentially great ecological importance (Fig. 1). Rain events of a few millimetres are unlikely to cause large hydraulic stress in streams, even if their catchments are highly impervious. However, such frequent events may impair stream biotic assemblages by delivering chemical, and perhaps thermal, effluents. The relative importance of erosive flow events and smaller overland flow events to ecological change in urban streams requires further research.

Increased peak flows during high-flow events constitute another feature of the hydrograph consistently affected by urban land use. Until the recent past, typical stormwater management has been to control runoff from a 1- to 2-y average recurrence interval storm event or larger, so that peak flow rates do not exceed predevelopment conditions (e.g., Victorian Stormwater Committee 1999, Roesner et al. 2001). However, the ecological benefits of managing increased peak flow of such large floods may be small (see "Morphological change" section below and Fig. 1).

Urbanization does not affect instream baseflows consistently among urban areas of the world (Konrad and Booth 2002, Nilsson et al. 2003, Roy et al. 2005). Reduced infiltration resulting from increased catchment impervious surfaces tends to reduce baseflows, although this effect may be counteracted by leakage of water supply or sewerage infrastructure, which may import water from outside the catchment (Fig. 1). Operation of impoundments also may influence baseflow (Roy et al. 2005). However, where counteracting effects of catchment conditions on baseflow discharges are minimal, reduced baseflow from urbanization usually compounds water chemistry problems, such as by increasing diel variation in dissolved oxygen and temperature (Fig. 1).

Water chemistry change.—Increased concentrations and loads of several chemical pollutants in stream water appear universal in urban streams, often occurring even at low levels of catchment urbanization (Hatt et al. 2004). Even in regions where the ecological importance of stormwater-derived pollution is minor (Booth et al. 2004), positive correlations have been observed between catchment urbanization and concentrations of some streamwater pollutants (Horner et al. 1997). Urban catchments in the southwestern US, however, may show high variation in streamwater nutrient concentrations, and may even exhibit transient nutrient limitation (Grimm et al. 2005). Obviously, the problems of urban-induced water-quality impairment will be much greater in areas where sewage and industrial effluents are poorly managed (e.g., Schoonover et al. 2005), although controlling such impairment without addressing stormwater impacts is unlikely to ameliorate all water-quality problems (Hatt et al. 2004).

Variation in water chemistry changes within and among urban areas with increasing urban land use can result from several causes: natural climatic or geological differences (e.g., urbanization increased conductivity in streams of eastern Melbourne, Australia, but diluted the more saline streams to the northwest of Melbourne, Walsh et al. 2001); from historical differences in land use that predate urbanization (Frost 1993, Iwata et al. 2003); or from differences in the age of urban land use (e.g., sediment loads may decline in streams draining older urban areas, Finkenbine et al. 2000).

The above causes of variation in water chemistry trends are primarily associated with features determining the supply of pollutants. Water chemistry will also be influenced by variability in the efficiency of catchment and instream processes to retain nutrients. The importance of managing urban catchments and streams to maximize such processes is discussed below.

Morphological change.—The width and depth of stream channels adjust in response to long-term changes in sediment supply and flow regime, unless the channels are subject to constraints such as unerosive bedrock (Dunne and Leopold 1978). Stormwater management policies designed to control the maximum flow rates from large events (as discussed above) were primarily targeted to reducing channel

erosion. However, frequent, smaller high-flow events in conventionally drained urban catchments may be more important causes of channel incision and resultant ecological impacts than infrequent, larger events (MacRae and Rowney 1992, Fig. 1). Influence of more frequent, small events likely also explains the common observation of disproportionate increases in channel erosion with only minor increases in discharge (Neller 1989, Booth 1990). Because of this hydrologic effect, or because direct engineering intervention often straightens channels or lines them with impermeable surfaces, reduction in channel complexity, and thus instream habitat, appears an almost universal symptom of the urban stream syndrome. In turn, channel incision and simplification, including reduction in hyporheic flow (Grimm et al. 2005) and hydrologic isolation from riparian vegetation (Groffman et al. 2003), often have important effects on several instream ecological processes (Fig. 1).

Organic matter input and retention.—Streams of the Atlanta, Georgia, region with high catchment urbanization showed low organic matter retention and high leaf breakdown rates (Paul 1999, Meyer et al. 2005), primarily because of increased scour rather than from an alteration in biotic processes. However, low organic matter storage has not been reported in all urban streams. For example, standing stocks of coarse particulate organic matter (CPOM, primarily leaves) in an Australian urban stream were significantly higher than in rural reference streams (Miller and Boulton 2005). Increased mass of instream organic matter in this study apparently resulted from increased leaf fall from many deciduous trees lining upland streets, which were connected to the channel by stormwater pipes. In both Atlanta and Australia, shredder macroinvertebrates were less abundant in urban streams than in rural streams (Paul 1999, Miller and Boulton 2005). Therefore, although physical processes may reduce organic matter retention in urban streams, this trend may be countered by reduced biotic processing through loss of shredding macroinvertebrates. Evaluation of organic matter levels in streams of urban catchments must consider changes to supply (both from riparian and catchment sources) and retention processes (Fig. 1).

Biological composition

Algae.—Increased nutrient concentrations in streams impacted by urbanization (e.g., Lee and Bang 2000, Hatt et al. 2004) can promote increased algal biomass. However, such a stimulatory effect on algal growth may be countered by increased flow disturbance (shear stress and scouring), turbidity, or depth within incised urbanized channels, increased toxicity from contaminated sediments (Paul and Meyer 2001), or even by direct, deliberate application of algicides into waterways (Grimm et al. 2005, Fig. 1).

Few studies have directly assessed the effect of urbanization on algal biomass. In urban streams of eastern Melbourne, Australia, Taylor et al. (2004) demonstrated an increase in biomass with increased urban density and drainage connection. In that study, increased surface light resulting from widened channels was countered by increased light attenuation in the channels deepened by incision (Fig. 1). Increased biomass was inferred to result from increased frequency of small storm flow events with high P concentrations. In contrast, in streams of western Georgia, USA, along an urbanization gradient, high streamwater N and P in urban catchments did not consistently increase algal biomass, likely because of concomitant increases in flow disturbance and scour (B. S. Helms and J. W. Feminella, Auburn University, unpublished data). No urban-related increase in algal biomass was observed in a study of Pennsylvanian streams (Hession et al. 2003a). Increased algal biomass as observed by Taylor et al. (2004) is less likely to occur in regions where, in the absence of urban impacts, streams are not nutrient-limited.

Compared with algal biomass, there are more studies of the effects of urbanization on algal community composition, although patterns appear inconsistent across geographic regions. Munn et al. (2002) documented a shift from forested streams dominated by cyanobacteria to diatom-dominated urban streams, whereas Taylor et al. (2004) noted a shift from diatom-dominated forested streams to urban streams with greatly increased biomass of filamentous algae. Changes in diatom composition from oligotrophic to eutrophic species have been commonly reported (Chessman et al. 1999, Winter and Duthie 2000, Sonneman et al. 2001, Newall and Walsh 2005). Such assemblage shifts have often been reported as showing no change in species richness (Sonneman et al. 2001, Newall and Walsh 2005) or a eutrophication-associated in-

crease in species richness (Chessman et al. 1999).

Macroinvertebrates.—Benthic macroinvertebrate assemblages are perhaps the most widely studied aspect of urban stream ecosystems (e.g., Chessman and Williams 1999, Walsh et al. 2001, Morley and Karr 2002, Stepenuck et al. 2002, Roy et al. 2003, Wang and Kanehl 2003, Wang and Lyons 2003, Miltner et al. 2004, Walsh 2004, and see Paul and Meyer 2001). In virtually all studies, sensitive species were absent or less abundant in streams draining urban areas. Globally, streams in urban areas are characterized by species-poor assemblages, consisting mostly of disturbance-tolerant taxa. Assemblages of highly degraded streams within urban catchments are numerically dominated by a few species of oligochaetes (typically tubificids, lumbriculids, and naidids) and chironomids. We know of no studies where any other pattern has been reported.

Because macroinvertebrate assemblages have been so widely studied and show consistent community shifts with catchment urbanization, this group of biota is arguably the most useful one for comparing interregional variation in response to urban land use. Variation in the shape and slope of relationships between macroinvertebrate and landuse variables across cities of contrasting climatic, physiographic, and social conditions is one area of potentially fruitful research. Less-studied research areas concerning macroinvertebrate response to urban land use include secondary production, and the potential for recovery of macroinvertebrate assemblages in highly degraded streams.

Fish.—Most studies have found that stream fish assemblages respond to catchment urbanization in a similar pattern to macroinvertebrates: a loss or reduced abundance of sensitive species, and a less diverse assemblage numerically dominated by disturbance-tolerant species (e.g., Roth et al. 1996, Wang and Lyons 2003). Such a trend was observed in streams of Atlanta (Roy et al. 2005), and in streams of the eastern Piedmont physiographic region of Maryland (Morgan and Cushman 2005). Similar results were reported in lower Piedmont streams of the southeast where fish health (as indicated by % of fish with eroded fins, lesions, or tumors), and proportions of sensitive breeding guilds (% lithophilic spawners) decreased with increasing urbanization (Helms et al. 2005). However, in the Coastal Plains physiographic region of Maryland the observed shift from sensitive to tolerant fish species was not accompanied by a reduction in species richness or abundance (Morgan and Cushman 2005). Shifts in assemblage structure seem universal, but such shifts may not always result in reduced species richness or abundance. In fact, highly abundant populations of tolerant species may be supported (Walters et al. 2003, but see Swift et al. 1986). As with macroinvertebrates, opportunities exist to better understand interregional patterns of fish assemblage response to urban land use, and the potential for recovery of fish assemblages in degraded streams.

Less-studied biota.—In their review, Paul and Meyer (2001) identified stream macrophytes as a group in which the response to urban land use has been little studied; this deficiency remains unchanged. The response to urbanization of higher vertebrates relying on stream resources is even less studied. In our series, influence of urban land use limiting distributions of the platypus, *Ornithorhynchus anatinus*, has been reported for the first time (Serena and Pettigrove 2005). The authors presented 3 hypotheses to explain lower abundance of platypus in urban sites: reduced feeding efficiency from increased algal growth in degraded streams, reduced abundance of preferred prey (generally sensitive invertebrate taxa), or bioaccumulation of toxicants, which may reduce survivorship and/or reproduction (Serena and Pettigrove 2005, Fig. 1).

Ecosystem processes

Nutrient processing.—Nutrient uptake was reduced in more urbanized streams of both Georgia (Meyer et al. 2005) and desert streams of Arizona and New Mexico (Grimm et al. 2005). In Atlanta streams, reduced uptake likely occurred because of reduced abundance of fine benthic organic matter, which decreased as catchment urbanization increased (Meyer et al. 2005). In desert streams, reduced uptake rates in urban streams were attributable to reduced channel complexity (hence reduced transient zone storage), and possibly reduced primary productivity, with the latter likely occurring from direct application of algicides into streams (Grimm et al. 2005).

Inwood et al. (2005) found higher sediment

denitrification rates in urban streams than in forested streams, although sediment denitrification in urban streams removed a smaller proportion of stream NO_3-N load than was the case in forested streams. Groffman et al. (2005) demonstrated that debris dams high in organic matter in highly urbanized streams could act as hot spots (McClain et al. 2003) for denitrification. High denitrification rates were associated with high NO_3–N concentrations, suggesting an important feedback mechanism between instream processes and water chemistry. However, the relative importance (and sustainability, Booth 2005) of such instream hot spots for denitrification compared with those elsewhere in the catchment (Grimm et al. 2005) remains unclear. For example, it is logistically difficult to maintain a high abundance of organic debris dams in urban streams with flashy, high stormflows, so this restoration measure may be prohibitive. Alternatively, dispersed stormwater control structures, drainage ditches, and other human structures that foster anaerobic conditions may function as denitrification hot spots in the catchment (Groffman and Crawford 2003).

Production and respiration.—Only a handful of studies have reported on the degree to which stream metabolism varied with catchment urbanization (Paul 1999, Meyer et al. 2005). Neither gross primary production (GPP), community respiration (CR), nor net ecosystem metabolism were associated with urbanization in Piedmont streams draining Atlanta (Meyer et al. 2005), and a similar result was reported from headwater urban streams from the same region (Gibson 2004). However, in a large river in suburban Atlanta, regulation of water withdrawals and the proportion of discharge as wastewater effluent appeared to control GPP and CR (Gibson 2004). Further research is required to test if a similar lack of trend is observed in streams where algal biomass increases with increasing urbanization (e.g., Taylor et al. 2004). In such streams, there is evidence of a shift of the dominant microbial pathways for C and nutrient processes from diverse sources to one dominated more by algal C (Harbott and Grace 2005).

Mechanisms Driving the Urban Stream Syndrome

Catchment sources of stress

The complexity of urban land use and the multitude of associated human activities present challenges for understanding the mechanisms by which urban impacts change ecological structure and function (Booth et al. 2004). Urban-derived stressors not only interact with each other, but stressors also may covary because many can originate from the same large-scale source (Fig. 1). Based on the available correlational evidence, primarily of spatial patterns, impacts of urban land use on aquatic ecosystems can be ascribed to a few major large-scale sources. Symptoms of the urban stream syndrome that appear to occur consistently across regions are predominantly driven by urban stormwater runoff, which, in almost all urban areas of the world, has traditionally been managed for flood control by direct piped connection between impervious surfaces and streams (Fig. 1). Therefore, it is likely that stormwater impacts are the primary driver behind the often-reported correlations between stream condition and catchment imperviousness.

Other anthropogenic impacts that may or may not be associated with urban land use may obscure the relationship between stream condition and imperviousness. For instance, Miltner et al. (2004) found that effects of combined or sanitary sewer overflows, wastewater treatment plant effluents, and legacy pollutants occurred independently of the urban density gradient in Ohio streams. When sites affected by such allied stressors were included, associations between biotic integrity and urban density were obscured (Miltner et al. 2004). Relationships between ecological condition and catchment imperviousness also may vary between and within regions because of differences in the permeability of pervious parts of the catchment (Booth et al. 2004) or differences in management practices for land cover and drainage of impervious areas (Walsh et al. 2005).

Some urban impacts may influence only a subset of stream ecosystem attributes. Effects on baseflow will vary depending on the degree to which reticulated water supply or sewerage networks leak or spill into the stormwater drainage system or enter the natural subsurface flow pathways to streams (Fig. 1). Such leaks are unlikely to have any effect on other aspects of hydrology, and water supply leaks are unlikely to have substantial impacts on water quality. If sewerage leaks reach streams through subsurface flows, their impacts on streamwater quality will largely be limited to pollutants that have

high mobility through soils, such as NO_3–N (e.g., Hatt et al. 2004). Differences in the extent to which infrastructure leakage affects streams may be a function of infrastructure design and age, as well as catchment physiography and climate.

Deforestation, particularly in the riparian zone, is often identified as an important driver of urban impacts to streams (e.g., Stephens et al. 2002, Booth 2005). Urban land use and riparian degradation usually covary (e.g., Morley and Karr 2002, Burton et al. 2005, King et al. 2005), with lowland urban development often resulting in restructuring or loss of riparian vegetation. Because of this covariance, direct evidence of the separate or relative importance of catchment urbanization compared with riparian land use is limited. In a study of paired reaches with and without riparian forest along an urban gradient in Pennsylvania, Hession et al. (2003a, b) found that the presence of riparian forest affected geomorphology, concentrations of bioavailable nutrients, and algal biomass independently of urban effects. In contrast, assemblage composition of diatoms, macroinvertebrates, and fishes were associated with the urban density gradient, but were less strongly affected by the presence of riparian forest (Hession et al. 2003a).

Riparian forests certainly have important ecological links to stream ecosystems through their influence on water chemistry, organic matter input, and shading (e.g., Pusey and Arthington 2003). It is conceivable, therefore, that loss of riparian forest may severely limit the potential for recovery of streams impacted by urban land use (Fig. 1). However, even in catchments with intact riparian forests, channel incision and increases in impervious surfaces and piped drainage can interact to significantly lower riparian water tables and, thus, potentially reduce the interaction between the riparian zone and pollutants moving in shallow groundwater flow from uplands (Groffman et al. 2002).

In one sense, piped stormwater drainage systems, typical of urban centers worldwide, serve to make large portions of urban catchments effectively riparian. In this context, rain, litter (leaf and human-derived), and pollutants that drop on or adjacent to impervious surfaces connected to drains are likely to be delivered directly to streams (Fig. 1). Therefore, we hypothesize that as the area of the catchment directly connected to streams by the piped drainage network increases, the relative influence of the true riparian zone on stream condition decreases.

There is some evidence, however, that the spatial configuration of urban land use and its proximity to the stream channel has an influence on stream ecological condition. King et al. (2005) demonstrated that urban land cover was a better predictor of macroinvertebrate composition if it was inversely weighted by the distance from the sampling site (i.e., modelling a larger effect for closer urban land use than for more distant urban land use). A diminution of effect with increasing distance could result from an increased probability of good riparian condition in sites with more distant catchment urban land use, allowing more urban runoff to be intercepted before reaching the stream. However, if the urban land use had conventional stormwater drainage networks that bypassed terrestrial pathways, this diminution of effect would more likely have resulted from instream processes dampening impacts with distance travelled along the stream rather than from protection afforded by riparian vegetation.

Relationships between instream ecological metrics and catchment metrics

Relationships between instream ecological condition and metrics of catchment land use such as TI have been interpreted in several ways (Fig. 2). The concept of a critical threshold of urban density beyond which the probability of degradation is greatly increased has been both championed (Beach 2001, Center for Watershed Protection 2003) and disputed (Booth et al. 2002). However, the possible shapes of relationships and the nature of such thresholds have not been clearly distinguished in this debate.

Booth et al. (2002) argued that a monotonic relationship between TI and stream condition was likely to be a more parsimonious representation than any other of the continuum of effects associated with increasing urban density, particularly if the distribution was considered a factor-ceiling distribution (i.e., a linear upper boundary of the distribution of data points; Thomson et al. 1996, Booth et al. 2004). However, even with a monotonic decline with increasing TI, a threshold of poor condition (i.e., streams reaching maximum degradation) at a level of catchment TI <100% is highly likely for

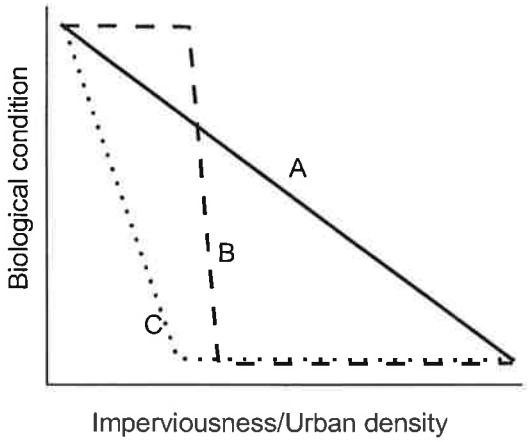


FIG. 2. Three models that have been applied to stream biological condition in response to catchment urbanization, often as a factor-ceiling distribution (Thomson et al. 1996), where most observations fall below the illustrated trendline. A.—A linear decline with increasing urban density (e.g., Booth et al. 2004). B.—An upper threshold switching to a lower threshold (e.g., King et al. 2005). C.—A linear decline with increasing urban density to a lower threshold (e.g., Walsh et al. 2005).

most ecological metrics. Therefore, the monotonic decline model advanced by Booth et al. (2002, relationship A in Fig. 2) is conceptually compatible with the linear-to-lower-threshold models of Walsh et al. (2005, relationship C in Fig. 2).

A stepped threshold relationship, where good stream ecological condition occurs up to a particular level of TI (often cited as 10%, Beach 2001) and beyond which degradation is highly likely (relationship B in Fig. 2), is consistent with observed distributions of ecological indicators in some studies (e.g., King et al. 2005, Walsh et al. 2005). The shape of the relationship between an ecological metric and a source of environmental stress may depend on the sensitivity of the response variable, the mode of action of a stressor (Allan 2004), or possibly the number and interactions of stressors. However, rather than being a function of ecological interactions, stepped threshold relationships could vary as a function of how landuse variables are measured, or the way urban areas have traditionally been built. For example, Walsh et al. (2005) reported streams of eastern Melbourne to be in good condition up to 12% TI, whereas streams with higher TI were consistently in poor condition, a distribution resembling a stepped threshold (relationship B in Fig. 2, see also King et al. 2005). However, this relationship became a linear decline to a threshold when effective imperviousness (EI) was used as the independent variable rather than TI (Walsh et al. 2005). Thus, the apparent threshold was a function of the proportion of impervious surfaces connected to the stream by pipes. In Walsh et al. (2005) and other studies, observed stepped-threshold relationships may be a function of how urban areas are developed, with widespread piped drainage networks only being installed universally beyond a certain level of development, rather than a relationship driven by ecological processes.

Walsh et al. (2005) found that a "linear-to-lower-threshold" model explained patterns of a wide range of ecological metrics, although water chemistry and algal-related metrics reached maximum levels of degradation at lower EI than did macroinvertebrate metrics. The degree to which these findings apply to other systems or geographic regions is unknown, and a key remaining question is if such changes in stream conditions, whether occurring linearly or as thresholds, are reversible. This knowledge is vital in understanding the potential for restoration of degraded streams because simple reversal of conditions may not be possible once a threshold is crossed.

Instream stressors and their interactions

The complex interactions of multiple urban-related stressors and various components of stream ecosystems result from a relatively few interrelated impacts arising from the way urban areas are currently built and managed (Fig. 1). The complexity of interactions among stream ecosystem components and catchment-scale processes underlines the argument of Booth (2005) that manipulating individual instream elements is unlikely to be self-sustaining unless large-scale catchment processes are also addressed. The importance of the catchment processes to the stream has long been recognized (Hynes 1975, Karr and Schlosser 1978), but often forgotten in the implementation of stream management.

A clearer understanding of the interrelationships portrayed in Fig. 1 is critical to guiding the actions required to reduce the impacts of

urban land use. For example, stormwater managers tend to incorporate end-of-pipe hydrologic management to address erosive flows (e.g., retention basins and treatment ponds and wetlands), but without understanding the mechanism of the relationship between hydrologic alteration and biotic impairment (e.g., frequency of pollutant delivery, high-flow stresses to biota) there is no guarantee that such management strategies will work. The frequency of overland flow, hypothesized to be a critical stressor to streams (Walsh et al. 2005), is unlikely to be addressed adequately using end-of-pipe solutions, but would require dispersed, at-source approaches to treatment (Booth 2005, Walsh et al. 2005). Adaptive management of urban developments is one approach that could be used to assess the relative importance of differing parts of the hydrograph. In correlational studies of spatial patterns of land use, the use of partial Mantel tests in path analytical frameworks (King et al. 2005) is also a potentially useful approach to quantifying the importance of linkages portrayed in conceptual models such as Fig. 1.

Our understanding of stressor mechanisms and their interactions is limited by a lack of experimental (i.e., causal) evidence. The unravelling of the interactions between small-scale stressors may ultimately prove experimentally intractable. The common catchment-scale sources of many stressors suggest that more tractable understanding—providing more applicable management solutions—may lie in experimental manipulation at the catchment scale (Walsh et al. 2005). Such approaches are essential because almost all studies of the effects of catchment urbanization on stream ecology have been correlational, substituting time effects (i.e., tracking temporal stream conditions as catchments develop) with space effects (i.e., comparing contemporaneous stream conditions across contrasting catchment urbanization). Furthermore, correlational studies can be vulnerable to problems of covariance between urban land use and natural landscape features (Allan 2004).

The Search for a Cure: Priorities for Restoration and Protection of Urban Streams

Urban streams have the potential to provide precious natural resources to humans who live near them (Meyer et al. 2005). In many cities of the world this potential is far from fully realized because, historically, most urban development has involved transforming streams into drains or sewers. The primary goal for urban waterway management for most of the 20th century was the safeguarding of humans from floods and disease. Although such a goal must remain the first priority, traditional approaches to waterway management for public health and safety have been at the expense of other goals, such as public amenity and ecosystem health. New approaches to urban design and waterway management show great potential for achieving all public safety and amenity goals, together with goals of improved ecological condition in streams of many urban areas (e.g., Lloyd et al. 2002).

As the movement to restore urban streams grows, urban stream ecologists will be challenged to identify the primary mechanisms of degradation, the best management actions to reverse those mechanisms, and attainable goals for restoration (Hobbs and Norton 1996, Booth 2005, Palmer et al. 2005, Walsh et al. 2005). Further challenges involve engaging the human communities of urban areas to achieve a shared understanding of what is achievable and desirable to communities for their local streams. For example, urban stream attributes with limited ecological values, such as mowed grass riparian zones or paved streamside paths, may have amenity values for some urban communities (e.g., Tunstall et al. 2000). Sometimes, value placed in such altered, unnatural environments can be a product of people not missing what they never had (Rosenzweig 2003), and stream ecologists might play a role in educating communities on how streams more closely resembling natural conditions might be more desirable. However, for such education of urban communities to be effective, restoration actions and attainable restoration goals must be appropriately balanced (Table 2).

Streams in good condition in areas with moderate levels of catchment urbanization have been reported in many urban centers (e.g., Booth et al. 2004, King et al. 2005, Walsh et al. 2005), suggesting that protection of ecological structure and function is possible at this and lower levels of urbanization. Two key factors are likely to be causes of high variability in stream ecological condition with similar TI: 1) the distance between the reach and urban land use (King et al.

TABLE 2. Five groups of goals for restoration in urban areas (columns) and 5 classes of management action (rows) that could be taken, alone or in combination, to achieve restoration goals. Allied stressors include sanitary sewer overflows or leaks and point source or long-lived pollutants from earlier land uses (e.g., Miltner et al. 2004). Dispersed stormwater treatment is assumed to be extensive enough to reduce frequency of runoff from the catchment to near the pre-urban state (Walsh et al. 2005). The likelihood and magnitude of success are indicated by symbols: S = some improvement likely but long-term sustainability unlikely, *? = improvement likely in some cases, *, **, *** = likely improvement of increasing magnitude.

Restoration measure	Aesthetics/ amenity	Channel stability	Enhanced N processing	Improved ecological condition	
				Riparian	Instream
1. Riparian revegetation	S			S	
2. Instream habitat enhancement	S	S	S		
3. End of pipe stormwater treatment	*?		*		
4. Eliminate allied stressors	*?		*?		
5. Dispersed stormwater treatment		*	**		
3 + 4	*?		*		
5 + 4	*?	*	**		*
5 + 4 + 2	*	*	***		**
5 + 4 + 2 + 1	*	*	***	*	***

2005), and 2) the hydraulic efficiency of stormwater drainage (Walsh et al. 2005). Research and adaptive management is required to test if these factors are truly causal agents. Well-designed experiments are required to assess 1) response of stream structure and function to forestland conversion to urban land use under different drainage design and spatial arrangements, and 2) if structure and function can be restored by drainage retrofits in existing urban areas (Walsh et al. 2005).

In many cities, active programs exist for geomorphic stream restoration to stabilize incising streams and to protect nearstream property and infrastructure (Brooks et al. 2002, Nilsson et al. 2003). Such stream-based restoration measures are what Booth (2005) described as short-term, local-scale enhancement. A growing literature exists suggesting that such measures are unlikely to result in composition of urban stream invertebrate or fish assemblages becoming more similar to those in nonurban streams (Table 2, Walsh et al. 2005). However, the potential for instream structures to act as hot spots for nutrient processes (Groffman et al. 2005) suggests that some ecological benefit may be achieved by local-scale enhancement of stream habitat (Table 2). Effects of habitat-scale enhancement on ecological variables, such as organic matter retention and nutrient processing, need investigation, including the degree to which structures built for habitat enhancement are sustainable (Frissell and Nawa 1992, Booth 2005).

The relative importance of terrestrial processes in the upland and riparian parts of the catchment compared to instream processes is a critical area of urban stream research, inextricably linked to the way stormwater is managed. Traditionally, stormwater management has largely been aimed at preventing floods, trapping sediment, and reducing erosion potential of runoff. Stormwater managers are increasingly aiming to minimize pollutant loads, particularly N, which is commonly an important threat to downstream coastal water bodies (Vitousek et al. 1997). The studies of nutrient uptake in our series (Grimm et al. 2005, Groffman et al. 2005, Meyer et al. 2005) all suggest an important feedback between streamwater nutrient inputs and nutrient uptake by instream processes. A critical question for urban water management, therefore, is whether N loads can be more effectively managed by maximizing processes that increase N retention in the catchment, the stream, or both (Grimm et al. 2005, Groffman et al. 2005).

It is almost certain that reversal of the consistently observed symptoms of the urban stream syndrome of a flashier hydrograph, elevated nutrients and contaminant concentrations, altered channel geomorphology and stability, and re-

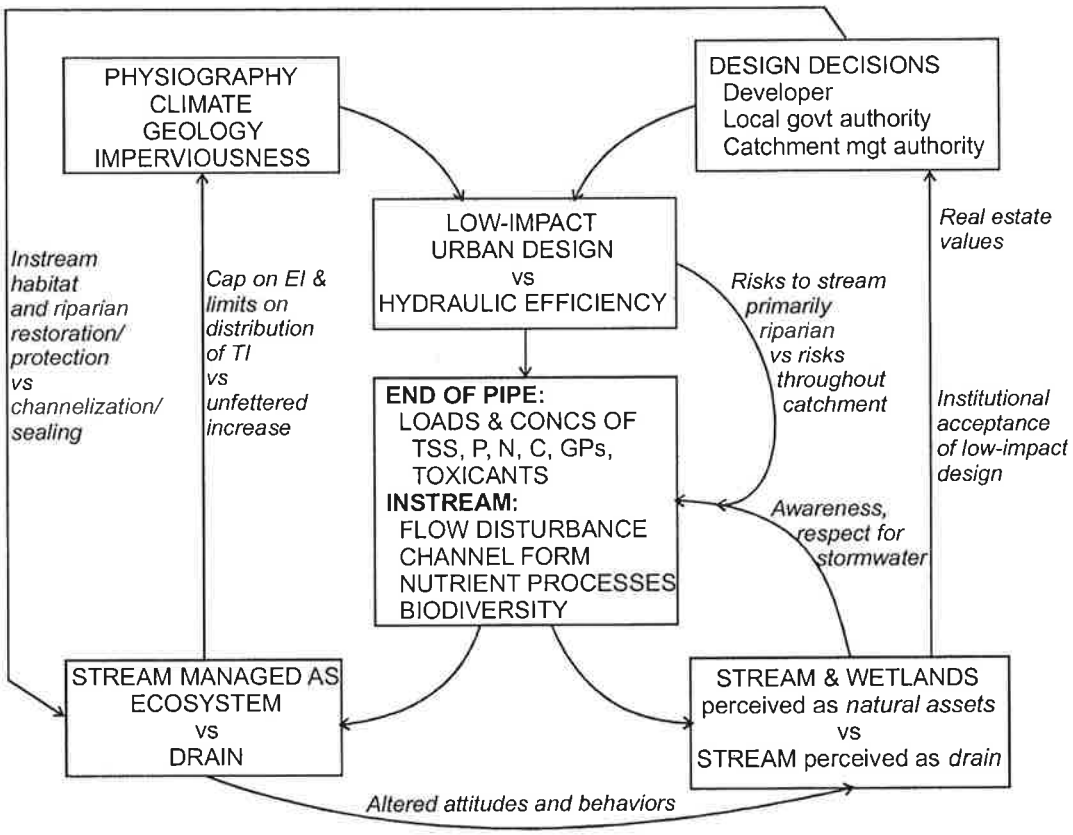


FIG. 3. A conceptual model of stormwater management in relation to stream ecology and urban ecology (after Grimm et al. 2000). EI = effective imperviousness, TI = total imperviousness, GPs = gross pollutants, TSS = total suspended solids.

duced biotic richness and increased dominance of tolerant species requires catchment-scale solutions. A primary requirement of reversing the urban stream syndrome is the management of wastewater effluent and legacy pollutants. In many parts of the developing world, such stressors present significant barriers to achievement of waterways that protect human health, let alone ecological health. In many cities of the developed world, these pollutants are now well managed, although streams remain in poor ecological condition, primarily because of stormwater impacts.

The extent to which stormwater impacts can be managed through innovative approaches to drainage design remains to be tested. However, we believe such approaches may offer the best opportunity for ecologically successful urban stream restoration. Such catchment-scale reductions in stormwater drainage connection may create an ecosystem that is more self-sustaining and resilient to perturbation, thus fulfilling important criteria for ecological improvement of streams (Palmer et al. 2005). Riparian revegetation and instream habitat enhancement also may be necessary, although these more traditional restoration approaches are unlikely to be sufficient by themselves in most urbanized catchments (Table 2). In many urban areas, the prospect of restoration of waterways to more naturally functioning streams may be so remote that urban communities may need to rethink restoration objectives. In such cases, the task may become one of designing ecosystems to maximize attainable ecosystem services (Grimm et al. 2005).

Stream ecology and urban ecology

Human populations are one of the central defining elements of urban areas, and future investigations of urban stream ecology must consider the interaction between social and ecological variables (Pickett et al. 1997, Meyer et al. 2005). The success of any attempt to improve the ecological condition of streams in urban areas will largely depend on human attitudes and behaviors within the catchments, and there may be inherent conflicts between appreciation of urban streams and their protection (Booth 2005). However, integrated social and ecological studies may help to maximize social and ecological outcomes. We end the paper with an example of a conceptual framework for an integrated understanding of social and ecological elements of a developing suburb.

Low-impact urban design (LID) has been identified as an approach with great potential to achieve ecological improvements in urban streams (Booth 2005, Walsh et al. 2005). However, this potential remains untested, because LID has not yet been adopted widely or strategically enough to assess its effects on receiving streams. Many institutional and social impediments to its widespread adoption remain in many regions. Fig. 3 (after Grimm et al. 2000) places the adoption of LID into a conceptual framework for understanding urban ecological systems. Treatment techniques used in LID are primarily applied in the catchment, rather than instream, and largely involve reduction of the hydraulic connection between urban impervious surfaces and the receiving stream.

Stormwater management tools (e.g., Cooperative Research Centre for Catchment Hydrology 2003) use large-scale variables such as climate, physiography, soil characteristics, and imperviousness to predict the concentrations and loads of selected pollutants exported from catchments. The framework (Fig. 3) broadens conventional stormwater management to include the stream and its biological components and processes, requiring predictive models of instream ecological response to stormwater management.

The framework also includes social attributes, which are intrinsic and thus critical elements of any urban ecological study. Human behavior will interact with ecological impacts of stormwater because attitudes and behavior regarding stormwater drainage will have a direct bearing on potential loads of pollutants delivered to the stormwater system. These attitudes are likely to be altered by changes in the condition of receiving waters resulting from the application of LID. Moreover, application of LID also reduces the risks associated with human behaviors (e.g., spills of pollutants onto impervious surfaces in the catchment) by reducing the direct connection between dispersed upland parts of the catchment and the stream. Changes in public attitudes and amenity of the neighborhood and its waterways are likely to result in tangible economic benefits, such as increased real estate values, which in turn, if coupled with educational programs designed to increase public awareness about the social and ecological advantages, are likely to increase and reinforce acceptance of LID by management authorities (Fig. 3).

Thus, the challenge for stream ecologists in furthering our understanding of streams in urban areas is to not only better understand interactions between catchments and stream processes, but to integrate this work with social, economic, and political drivers of the urban environment. The advancement of stream ecology in urban areas and the conservation and restoration of urban streams will require stream ecologists to embrace the approaches of urban ecology (e.g., Grimm et al. 2000) in its integration of ecological, social, behavioural, and economic research.

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June 19, 2013
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Received: 31 January 2005
Accepted: 15 June 2005

EXHIBIT 17

FAX MEMO

January 7, 2006

TO: Kevin Bundy

FROM: Dan Silver (2138042750)

RE: Conservation Bank Agreement

#pages with cover: 26

CHIQUITA CANYON CONSERVATION BANK AGREEMENT

By And Among

THE UNITED STATES FISH AND WILDLIFE SERVICE
("Service")

THE CALIFORNIA DEPARTMENT OF FISH AND GAME
("Department")

and

THE FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY
("TCA")

May 24, 1996

OC/961370032
5/23/96-Execution Copy

EXHIBIT 5

CHIQUITA CANYON CONSERVATION BANK AGREEMENT

This AGREEMENT REGARDING THE CHIQUITA CANYON CONSERVATION AREA ("Agreement") is entered into as of the last date subscribed below by and among the UNITED STATES FISH AND WILDLIFE SERVICE ("Service"), the CALIFORNIA DEPARTMENT OF FISH AND GAME ("Department"), and the FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY ("TCA") with regard to the facts described in Section 2. These entities may be referred to collectively as "Parties" and each individually as a "Party." For good and valuable consideration, the receipt and adequacy of which are acknowledged, the Parties agree as follows:

1. DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1. "Biological Opinion" means a biological opinion issued by the Service pursuant to Section 7(b) of FESA dated May 14, 1996 and attached hereto as Exhibit 1.

1.2 "CEQA" means the California Environmental Quality Act (Cal. Public Resources Code § 21000 et. seq.)

1.3 "CESA" means the California Endangered Species Act (Cal. Fish and Game Code, § 2050 et. seq.)

1.4. "Chiquita Canyon" means the area shown on map attached hereto as Exhibit 2.

1.5. "Chiquita Canyon Conservation Area" means the area subject to the Conservation Easements acquired by the TCA consisting of approximately 1,182 acres and generally shown on the map attached hereto as Exhibit 2.

1.6. "Conservation Easements" means easements in perpetuity with regard to the Chiquita Canyon Conservation Area acquired by the TCA and substantially in the form of Exhibit 3 hereto.

1.7 "Credit Area" shall mean any property within the counties of Los Angeles, Orange, Riverside, San Bernardino, or San Diego (i) that is not within a planning area that is subject to an active effort to develop a habitat conservation plan or natural community conservation plan, and (ii) any other property, whether or not such property is covered by clause (i), that is approved by the Service and Department for the receipt of Conservation Credits. After April 1, 2001, "Credit Area" shall mean any property within the counties of Los Angeles, Orange, Riverside, San Bernardino or San Diego (A) that is not within a planning area of a habitat conservation plan or natural community conservation plan that has been approved by the Service and Department, and (B) any property otherwise approved by the Service and Department for the receipt of Conservation Credits.

1.8. "CSS" means coastal sage scrub and riversidian sage scrub found within the Credit Area and includes those plant species typically found within coastal sage scrub or riversidian sage scrub in the Credit Area.

1.9. "Conservation Credits" means the credits established pursuant to this Agreement which shall serve as approved mitigation or compensation for activities impacting CSS or Species of Concern as provided in this Agreement.

1.10. "Environmental Laws" includes all federal and state laws governing or regulating the impact of development activities on land, water or biological resources as they relate to Species of Concern or CSS, including but not limited to CESA, FESA, CEQA, NEPA, the Fish and Wildlife Coordination Act, the Fish and Wildlife Act of 1956, California Fish and Game Code Section 1802, and the Natural Community Conservation Planning Act, and includes any regulations promulgated pursuant to such Environmental Laws.

1.11. "FESA" means the federal Endangered Species Act, as amended (16 U.S.C. § 1531 et. seq.)

1.12. "FTC/N" means the Northern Segment of the Foothill Transportation Corridor, including interchanges, toll facilities and associated facilities, which extends from Oso Parkway to the east leg of the Eastern Transportation Corridor. The FTC/N is generally shown on the map attached hereto as Exhibit 4.

1.13. "FTC/S" means the proposed Southern Segment of the Foothill Transportation Corridor, including interchanges and associated facilities, which extends from Oso Parkway to Interstate 5. The FTC/S is generally shown on the map attached hereto as Exhibit 5.

1.14. "NEPA" means the National Environmental Policy Act (42 U.S.C. § 4321 et. seq.)

1.15 "Occupied CSS Habitat" means CSS that is utilized by one or more gnatcatchers for breeding, feeding, sheltering or foraging.

1.16. "Oso Segment" means that portion of the FTC/N extending between the current terminus of FTC/N at Antonio Parkway to Oso Parkway.

1.17. "Southern NCCP" means the plan being developed pursuant to the Natural Community Conservation Planning Act and FESA with regard to the conservation of CSS, and associated species and habitats within the Southern Subregion of the County of Orange.

1.18. "Species of Concern" means (1) the following: species that reside within and depend upon the coastal sage scrub community and which are known to occur within the Chiquita Canyon Conservation Area: San Diego desert woodrat, southern California rufous-crowned sparrow, coastal California gnatcatcher, coastal cactus wren, orange-throated whiptail, coastal western whiptail, San Diego horned lizard, Coronado skink, red diamondback rattlesnake, foothill mariposa lily, catalina mariposa lily, and Coulter's

matilija poppy, and (2) other species which the Service and Department agree may be added to the foregoing list.

2. RECITALS

2.1 TCA is a joint powers authority formed by the County of Orange and a number of cities within the County or Orange pursuant to Government Code sections 6500 et. seq. and 66484.3, for the purpose of planning, financing, designing and constructing the FTC/N and FTC/S.

2.2 Under CESA, California Fish and Game Code § 1802, and other State law, the Department has jurisdiction over the conservation, protection, restoration, enhancement and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. The Department is also the manager and trustee of fish and wildlife resources and their habitat pursuant to California Fish and Game Code section 1802.

2.3. The Service has jurisdiction over the conservation, protection, restoration, enhancement and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable population of those species to the extent set forth in FESA, the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-666c, and the Fish and Wildlife Act of 1956, 16 U.S.C. § 742(f) et. seq. and other federal laws.

2.4. As part of planning, designing and constructing the Oso Segment of the FTC/N, TCA and the United States Army Corps of Engineers have engaged in consultation with the Service pursuant to Section 7 of the FESA with regard to the effect

of the Oso Segment on the coastal california gnatcatcher (*Polioptila californica californica)* ("gnatcatcher") and its habitat.

2.5 TCA has committed to acquire two conservation easements: Chiquita Canyon Perimeter Conservation Easement and Chiquita Canyon Center Conservation Easement (collectively, "Conservation Easements") from the fee owner over approximately 1,182 acres in Chiquita Canyon. The Service and the Department hereby approve the form of the Conservation Easements attached hereto as Exhibit 3. The Conservation Easements (i) do not include the right-of-way or other land necessary for the construction or operation of the Oso Segment, (ii) explicitly contemplate construction and operation of the Oso Segment, and (iii) allow the construction of a water reservoir by the Santa Margarita Water District on approximately twenty-four (24) acres in accordance with approvals from the Service and Department. The Conservation Easements provide for continued management of the Chiquita Canyon Conservation Area by TCA subject to the restrictions in the Conservation Easements in perpetuity, in accordance with a management plan approved by the Service pursuant to Section 3.2, or until an alternative management arrangement is developed as part of the Southern NCCP. Management activities by TCA shall commence concurrent with clearing and grubbing of the Oso Segment. TCA may transfer responsibility for funding and implementing the management plan to a third party with the consent of the Service and the Department.

2.6 The Chiquita Canyon Conservation Area contains extensive CSS and other habitat for the gnatcatcher and other sensitive species. The acquisition of the Conservation Easements will provide significant conservation benefits to the gnatcatcher

and other sensitive and rare species and will promote the completion of the Southern NCCP.

2.7. The Parties acknowledge that the Conservation Easements will result in mitigation value of three-hundred and twenty-seven (327) acres of Occupied CSS Habitat above and beyond that mitigation which is necessary to mitigate and compensate for the impacts of the construction and operation of the Oso Segment on the gnatcatcher and CSS. TCA desires to establish a conservation bank composed of mitigation credits based on this excess mitigation value, to utilize such credits with regard to other TCA projects, including but not limited to FTC/S, and to sell one or more of such credits to third parties as qualified compensation pursuant to the FESA, CESA and other state and federal laws applicable to the activities of such third parties.

2.8 The Service, the Department and TCA are also engaged, with diverse other parties, in the development of the Southern NCCP, pursuant to the NCCP Act (Cal. Fish and Game Code section 2800 et seq.), CESA and FESA. The Parties contemplate that the Chiquita Canyon Conservation Area may be incorporated into regional or subregional habitat reserves as part of the Southern NCCP. The Parties intend that, notwithstanding any incorporation into a Southern NCCP reserve, this Agreement shall continue in full force and effect.

2.9 The parties desire to enter into this Agreement to set forth the terms and conditions pursuant to which the Chiquita Canyon Conservation Bank will be established and implemented.

3. PREPARATION AND APPROVAL OF MANAGEMENT PLAN.

3.1. Preparation of Management Plan.

TCA shall develop, fund and implement a management plan ("Management Plan") with regard to the Chiquita Canyon Conservation Area. The objective of the Management Plan shall be to assure the protection and maintenance of the Conservation Area's existing wildlife values, pending the completion of the Southern NCCP or in perpetuity if the Southern NCCP is not completed. The management plan shall identify responsible parties and measures for control of public access, fire management, invasive plant and feral animal control, resource monitoring, and other appropriate wildlife resource stewardship strategies. The Management Plan shall provide for a right of access to the Chiquita Canyon Conservation Area by the Service and Department as provided in the Conservation Easements to monitor implementation of the Management Plan and this Agreement.

3.2. Submission of Management Plan to Service and Department.

Within six months of the recordation of the Chiquita Canyon Center Conservation Easement, TCA shall submit the Management Plan to the Service and Department for review and approval pursuant to this Agreement, which approval shall not be unreasonably withheld. The Management Plan may be amended from time to time with the approval of the Service and Department.

3.3. Transfer of Management Responsibilities and Endowment.

In the event that the TCA is unable to implement the Management Plan, or to otherwise manage the Chiquita Canyon Conservation Area as provided in this Agreement, TCA shall transfer management responsibilities for the Chiquita Canyon

Conservation Area to a third party approved by the Service and Department, and shall establish an endowment sufficient to fund the ongoing management of the Chiquita Canyon Conservation Area in accordance with the Management Plan.

3.4. Access of Service and Department to Conservation Area.

The TCA shall provide reasonable access by the Service and Department to the Chiquita Canyon Conservation Area for the purpose of monitoring the implementation of the management plan and this Agreement. Such access shall be provided in the manner described in the Conservation Easements.

4. ESTABLISHMENT OF CHIQUITA CANYON CONSERVATION BANK

4.1. Establishment of Conservation Bank.

The Chiquita Canyon Conservation Bank shall be deemed established upon the recordation of the Conservation Easements by TCA and execution of this Agreement by the Parties. TCA shall protect and maintain the existing wildlife values of the Chiquita Canyon Conservation Area in perpetuity in accordance with the Conservation Easements and the Management Plan provided for in Section 3.1. or until an alternative management is agreed upon among the parties and implemented in accordance with the Southern NCCP or other approved NCCP Plan. Upon establishment of the Chiquita Canyon Conservation Bank, there are established for use in accordance with this Agreement, three hundred and twenty-seven (327) Conservation Credits. Each Conservation Credit represents one acre of Occupied CSS Habitat value. No Conservation Credits shall be established, in excess of the 327 Conservation Credits established pursuant to this section 4.1, due to natural restoration of the Chiquita Canyon Conservation Area except as provided in section 8 herein.

4.2. Conservation Bank Evaluation and Acceptance.

Representatives of the Service and Department have inspected and evaluated the Chiquita Canyon Conservation Area for purposes of determining its biological values in connection with the establishment of Conservation Credits. On the basis of such inspection and evaluation, the Service and Department acknowledge and agree that as consequence of the grant of the Conservation Easements, the Chiquita Canyon Conservation Area possesses biological values which support the Conservation Credits established by this Agreement. Exclusive of mitigation and compensation associated with impacts to wetlands and riparian habitat, the Conservation Credits shall serve as mitigation and compensation for impacts to (i) gnatcatchers, (ii) other Species of Concern, and (iii) CSS as provided in this Agreement.

5. USE OF CONSERVATION CREDITS BY TCA

5.1. Establishment of System for Use of Conservation Credits.

There is hereby established a system for the expenditure of the Conservation Credits established by this Agreement which may be used by TCA, in its sole discretion, to mitigate or compensate for environmental impacts to gnatcatchers, other Species of Concern, and CSS.

5.2. Use and Relinquishment of Conservation Credits.

Consistent with this Agreement, TCA may use Conservation Credits by relinquishment thereof in writing to the Service and Department in conjunction with any projects or activities proposed or undertaken by the TCA within the Credit Area or within

the action area for the FTC/S; provided that the Service and Department have determined that the use of the Conservation Credits as mitigation for the proposed project is appropriate, which determination shall not be unreasonably withheld. It is intended that TCA may use the Conservation Credits in connection with regulatory or other approvals of the FTC/S. Relinquishment and use of Conservation Credits by the TCA pursuant to this Agreement shall be documented by a letter addressed to the Service and Department from the Chief Executive Officer of the TCA specifically relinquishing a set number of Conservation Credits.

5.3. Satisfaction of Environmental Laws.

The Service and the Department intend that Conservation Credits may be used by TCA to satisfy the requirements of one or more Environmental Laws, consistent with Section 5.2, with regard to the mitigation or compensation for impacts resulting from habitat loss of any project proposed or undertaken by the TCA within Southern NCCP planning area or the Credit Area that may result in (i) disturbance or removal of CSS, or (ii) other adverse impacts to gnatcatchers or other Species of Concern.

5.4. Valuation of Conservation Credit Values for Use By TCA

If, pursuant to Section 5.2, the TCA provides notice to the Service and Department of its intent to relinquish Conservation Credits, as provided in this Agreement, and the Service and Department determine that the use of the Conservation Credits is appropriate as provided in Section 5.2, the Service and Department shall value such Conservation Credits as mitigation and compensation for projects or activities proposed or undertaken by the TCA as set forth in that certain letter dated April 24, 1996,

which is attached hereto as Exhibit 6 and incorporated herein, from the Service and Department to Mr. Steve Letterly of the TCA.

6. SALE OF CREDITS TO THIRD PARTIES AND USE OF CREDITS BY THIRD PARTIES.

6.1. Sale of Credits by TCA.

(a) TCA shall be entitled to transfer Conservation Credits, in its sole discretion, by sale or otherwise to any person, agency, municipality, partnership, limited liability company, sole proprietor, partnership or other entity (collectively "person") with regard to any project or activity within the Credit Area.

(b) TCA shall have the exclusive right to determine, in its sole discretion, the price, terms and other consideration concerning any and all Conservation Credits to be transferred. Transfer of Conservation Credits shall be accounted for in the annual report described in Section 7.1, and TCA shall report to the Service and Department that Conservation Credits have been transferred within 30 days of the transaction.

6.2. Use of CSS Credits By Third Parties

(a) Any person to whom TCA has transferred one or more Conservation Credits is authorized to use such Conservation Credits in satisfaction of the requirements of any Environmental Laws to mitigate or compensate for impacts to CSS, gnatcatchers or other Species of Concern; provided that; the Service and Department have determined that the use of the Conservation Credits as mitigation for the proposed project is appropriate, which determination shall not be unreasonably withheld..

(b) The Service and the Department hereby agree that third parties may expend Conservation Credits by relinquishment thereof in the same manner as described above in Section 5.2 for relinquishment of Conservation Credits by TCA.

7. CONSERVATION CREDIT REPORTING PROCESS

7.1. Annual Report

Annually, on the anniversary of the Effective Date, TCA shall submit to the Service and Department an annual report on the status of the Conservation Credits, and any Additional Credits established pursuant to Section 7 of this Agreement. The annual report shall document:

(1) the number of Conservation Credits relinquished by TCA or transferred to persons in the preceding year,

(2) the cumulative total of Conservation Credits relinquished or transferred pursuant to this Agreement since the Effective Date, and

(3) the name and address of each entity to whom Conservation Credits have been transferred and the number of such credits transferred in the preceding year.

7.2. Objections to Annual Report

Unless objected to within sixty (60) days from receipt thereof by the Service and/or the Department, each annual report shall conclusively establish the status of the Conservation Credits and any Additional Conservation Credits.

8. **ADDITIONAL CREDITS FOR RESTORATION ACTIVITIES**

(a) TCA may apply to the Service and Department for additional Conservation Credits ("Additional Conservation Credits") beyond the 327 Conservation Credits , for revegetation or restoration of land within the Chiquita Canyon Conservation Area, including CSS or other habitat types including, but not limited to, oak woodland, wetlands and native grasslands.

(b) If TCA elects to apply for such credits, TCA shall provide a restoration plan for approval by the Service and the Department. The restoration plan shall set forth the specific area within the Chiquita Canyon Conservation Area to be restored, the method of restoration, a statement of the habitat value being restored, success criteria and a request for a set number of Additional Conservation Credits calculated in acres.

(c) The Service and the Department shall consider in good faith any application filed by the TCA for the approval of Additional Conservation Credits and may approve such Additional Conservation Credits provided that the restoration activity accomplishes biological goals that are desired by the Service and the Department, that the restoration would not otherwise occur through natural processes within a reasonable time frame, that the base credit of 327 credits be reevaluated to adjust for the changes associated with the restoration and if such Additional Conservation Credits comply with the then applicable policies of the Service and Department, as applicable, governing the establishment of mitigation or compensation credits as a result of restoration or revegetation activities. The Service and Department may issue Additional Conservation

Credits to TCA by letter accepting the restoration or revegetation project and stating the number of Additional Conservation Credits issued.

(d) The Parties acknowledge that restoration or revegetation within the Chiquita Canyon Conservation Area, and the issuance of Additional Conservation Credits may require reinitiation of consultation on the Oso Segment pursuant to Section 7 of FESA, and will require the approval of the U.S. Army Corps of Engineers ("ACOE") to the extent that such Additional Conservation Credits will be utilized as mitigation for impacts to "waters of the United States" under the regulatory jurisdiction of the ACOE.

9. CONDITIONS PRECEDENT; DEFAULT

9.1. Conditions Precedent

The following shall be conditions precedent to the effectiveness of this Agreement:

(1) The Service shall have issued a Biological Opinion concluding that the Oso Segment is not likely to jeopardize the continued existence of the gnatcatcher. The Biological Opinion shall include an "incidental take statement" that authorizes the incidental take of the gnatcatcher in accordance with the terms and conditions of the Biological Opinion.

9.2. Default

(a) Upon occurrence of the default by TCA, the Service and/or the Department shall notify TCA in writing that a default has occurred and explain the basis therefor.

Except in the case of an imminent and serious injury to gnatcatchers, the Species of Concern or CSS arising from the alleged default, TCA shall have sixty (60) days to either respond to, refute the allegation to the satisfaction of the Service and/or Department, as appropriate, to cure such default, or to diligently commence to cure a default which cannot reasonably be cured within the 60-day time period. Except as provided in the preceding sentence where immediate remedial action is required, after 60 days from the date TCA receives notice of a default pursuant to this subsection, the Service and/or the Department, as applicable, shall be entitled to pursue all remedies available at law or in equity, including specific performance and injunctive relief, to enforce the terms of this Agreement; provided that TCA shall not be liable in monetary damages to the Service or Department for breach of this Agreement, it being expressly understood among the parties that monetary damages will not provide an adequate remedy for such breach.

(b) The following is a non-exclusive list of occurrences which shall constitute an event of default by TCA:

(1) TCA's failure to provide the Service and the Department with the annual report in a timely fashion in accordance with the terms of this Agreement.

(2) TCA's use or transfer of Conservation Credits in violation of the terms of this Agreement.

(3) TCA's failure to prepare a Management Plan or to transfer Management responsibilities and establish an endowment as provided in Section 3.

(4) TCA's failure to implement fully a restoration or enhancement plan based upon which TCA has received additional Conservation Credits pursuant to Section 8 hereof.

(c) On occurrence of a default by Parties other than TCA, TCA shall notify the defaulting Party in writing that a default has occurred and identify the reasons therefor. The defaulting Party shall have sixty (60) days to either respond to, refute the allegation to the satisfaction of the TCA, or to cure such default, or diligently commence to cure a default which cannot reasonably be cured within a 60-day time period. After 60 days from the date the Service and/or Department receives notice of a default pursuant to this subsection, TCA shall be entitled to pursue all remedies available at law or in equity, including specific performance and injunctive relief, to enforce the terms of this Agreement; provided that the Service and/or Department shall not be liable in monetary damages to the TCA for breach of this Agreement, it being expressly understood among the parties that monetary damages will not provide an adequate remedy for such breach.

(d) The following is a non-exclusive list of occurrences which shall constitute an event of default by Parties other than TCA:

(1) Failure or refusal of the Department or Service to accept Conservation Credits as compensation for the impacts of activities

by TCA or third parties acquiring Conservation Credits from TCA, consistent with this Agreement.

10. FUNDING FOR MANAGEMENT OF THE CONSERVATION BANK LANDS

For each Conservation Credit sold or transferred for non-TCA projects , the TCA shall deposit into an endowment account eight hundred dollars ($800.00). TCA shall report to the Service and Department any deposits made into the endowment account within 30 days of the transaction. Prior to the sale or transfer of the first Conservation Credit, the endowment account shall be established in a manner acceptable to the Service and the Department. The interest from the endowment account shall be provided annually to the Conservation Bank land manager for activities associated with maintaining the conservation values of the bank lands.

11. MISCELLANEOUS

11.1. Reliance by TCA

The TCA has entered into this Agreement, and has expended substantial sums to acquire the Conservation Easements, in reliance on the assurances of the Service and Department in this Agreement on that (i) the TCA will be able to utilize the Conservation Credits to mitigate for projects and activities undertaken by TCA as provided in this Agreement, (ii) TCA will be able to transfer the Conservation Credits to third parties, as provided in this Agreement, and (iii) the Service and the Department will value the Conservation Credits as high value mitigation consistent with the NCCP Conservation Guidelines. Each of the Service and the Department represents and warrants for the benefit of the TCA and its successors and assigns that the execution and delivery of this Agreement has been duly authorized and approved by all requisite action, no other

authorization or approval, whether of governmental bodies or otherwise will be necessary in order to enable the Service and the Department, respectively, to enter into and comply with the terms of this Agreement, and the persons executing this Agreement on behalf of the Service and the Department have the authority to bind the Service and the Department, respectively.

11.2. Notices

(a) All notices, demands, or requests from one party to another may be personally delivered, sent by facsimile, send by recognized overnight delivery service, or sent by mail, certified or registered, postage prepaid, to the addresses stated in this paragraph. Such notices shall be effective at the time of personal delivery, facsimile transmission, or within five (5) days of mailing by first class mail.

Foothill/Eastern Transportation Corridor Agency
201 E. Sandpointe, Suite 200
P.O. Box 28870
Santa Ana, CA 92799-8870
Attention: William Woollett, Jr.
Chief Executive Officer

With a copy to:

Robert D. Thornton, Esq.
Nossaman, Guthner, Knox & Elliott
Suite 1800
18101 Von Karman
Irvine, CA 92715-1007

California Department of Fish and Game
1416 Ninth Street, Room 1341
Sacramento, CA 95814
Attention: Director

Regional Director
U.S. Fish and Wildlife Service
Portland Eastside Federal Complex
911 N.E. 11th Avenue
Portland, OR 97232-4181

(b) Any party may change the address to which such notices may be sent by giving the other parties written notice of such change. The parties agree to accept facsimile transmitted signed documents and agree to rely upon such documents as if they bore original signatures. The parties agree to provide to the others copies of such facsimile documents bearing original signatures, transmitted by regular mail.

11.3. Entire Agreement

This Agreement is intended to implement certain terms and conditions of the Biological Opinion. This Agreement, along with Biological Opinion and the exhibits attached hereto, constitutes the entire Agreement and understanding between the parties with respect to the Chiquita Canyon Conservation Area Mitigation Bank. This Agreement supersedes all prior and contemporaneous agreements, representations, or understandings of the parties, if any, whether oral or written.

11.4. Governing Law

This interpretation of this Agreement shall be governed by the laws of the State of California and applicable Federal law including the ESA.

11.5. No Third Party Beneficiaries

This Agreement is solely for the benefit of TCA, the Department and the Service. The parties intend that, except for third parties that have been transferred Conservation Credits pursuant to this Agreement, only the parties to this Agreement and their approved assignees shall benefit from the Agreement. This Agreement shall not create in the public, any member of the public, any other person or entity, except a transferee or assignee of the parties or the Conservation Credits created pursuant to this Agreement, any rights as a third party beneficiary to this Agreement, nor shall it authorize anyone not a party to this Agreement to maintain a suit for injuries or damages under the provisions of this Agreement.

11.6. Signature in Counterparts

This Agreement may be executed by the parties in several counterparts, each of which shall be deemed to be an original copy.

11.7. Amendments

This Agreement is not subject to amendment except in a writing signed by all the parties.

11.8. Effective Date

This Agreement shall be effective upon execution by all parties.

11.9. Pre-existing Rights

Notwithstanding anything to the contrary contained in this Agreement, the parties agree and recognize that this Agreement is made subject to any and all existing rights-of-

way, easements, surface leases, subsurface leases, contracts, and other instruments dated prior to the effective date of this Agreement which may affect any or all of the Chiquita Canyon Conservation Area, including all rights of ingress and egress necessary for the owners of such preexisting rights.

11.10. Cooperation

The Service and the Department agree to reasonably cooperate with TCA in the implementation of this Agreement. Such cooperation by the resource agencies shall include, without limitation:

(1) Confirming in writing to prospective purchasers of Conservation Credits that Conservation Credits are available to mitigate impact to gnatcatcher and other Species of Concern and impacts to CSS within the Credit Area.

(2) Acknowledging that the Chiquita Canyon Conservation Area Conservation Bank is a conservation bank "approved" by the Service and the Department, and including this conservation bank on any list maintained by the Service and the Department of all such approved mitigation and conservation banks and making such list available to prospective purchasers of Conservation Credits within the Credit Area.

11.11. Interpretation and Headings

The subject headings of the sections of this Agreement are provided for convenience only and shall not affect the construction or interpretation of any of the provisions of the Agreement. This Agreement shall not be construed as if it had been prepared by any one party, but rather as if all parties had prepared the Agreement.

Dated: _____

FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY

By: _____
William Woollett, Jr.
Title: Chief Executive Officer

Approved as to form:
Nossaman, Guthner, Knox & Elliott
(TCA Counsel)

By: _____

Dated: _____

UNITED STATES FISH AND WILDLIFE SERVICE

By: _____
Title: _____

Approved as to form:
Office of the Regional Solicitor
U.S. Department of the Interior
(Service Counsel)

By: _____

Dated: _____

CALIFORNIA DEPARTMENT OF FISH AND GAME

By: _____
Title: _____

Approved as to form:
Office of Legal Counsel
California Department of Fish and Game
(Department Counsel)

By: _____

EXHIBIT H

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
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PETER R. MILJANICH
Attorney
miljanich@smwlaw.com

April 22, 2013

Via U.S. Mail and Electronic Mail
Valarie McFall
Director, Environmental Services
Transportation Corridor Agencies
125 Pacifica
Irvine, CA 92618

Re: Foothill/Eastern Transportation Corridor Agency April 18, 2013 Approval of Addendum to Final Subsequent Environmental Impact Report and Conceptual Design of the Tesoro Extension

Dear Ms. McFall:

This letter is submitted on behalf of the Surfrider Foundation, Natural Resources Defense Council, Endangered Habitats League, Sierra Club, California State Parks Foundation, Sea and Sage Audubon Society, Laguna Greenbelt, Inc., Audubon California, California Coastal Protection Network, Defenders of Wildlife, Wildcoast-Costa Salvaje, and Orange County Coastkeeper.

On April 18—in a special meeting convened without any meaningful notice to the public—TCA approved a CEQA Addendum to the 2006 Final Subsequent EIR for the SOCTIIP and approved the conceptual design for the so-called "Tesoro Extension," the $200 million first segment of the controversial Foothill South Toll Road project.

This circumvention of public process for one of the most controversial projects in California is nothing short of shameful, and it contradicts TCA's repeated assurances that it would provide a public workshop, an opportunity for public comment, and responses to public comment prior to taking action on the Addendum or the Tesoro Extension project. We ask that TCA rescind its approvals of April 18 and re-notice a meeting for a later date, at which the public can have a full and fair opportunity to participate.

As TCA is well aware, attendance at public meetings on the Foothill South project has been consistently high, reaching over 3,000 when the project was considered by the Coastal Commission, and again when it was considered by the Secretary of Commerce. When the Regional Water Quality Control Board considered the Tesoro Extension proposal last month, it received thousands of letters in opposition to the project, and hundreds of people attended the Regional Board's initial public hearing on the matter. It is simply incredible that TCA would take action outside of the light of public scrutiny for a project generating this level of interest.

By taking this action, TCA has reneged on repeated promises made to the public to provide opportunities for the public to participate and comment on this project. TCA's website still states, "After the traffic and environmental analyses are completed, ***there will be a public review period for the Environmental Impact Report addendum and public workshops***." (*See* Transportation Corridor Agencies, *Tesoro Extension*, RELIEVETRAFFIC.ORG, http://www.relievetraffic.org (last accessed on April 22, 2013) (emphasis added), printout attached hereto as Exhibit A.)

On June 29, 2012, you assured members of the Save San Onofre Coalition that TCA would provide substantial public process prior to approving the Addendum, stating on videotape:

> "We're going to have ***a public workshop*** and in between that public workshop we are going to ***circulate both the NEPA and CEQA document for public review and comment.*** And then we will provide ***response to comments*** on those as well."

This recording is posted online and is publically accessible. *See* SaveTrestles, *TCA's Valarie McFall Discussing CEQA-Short Clip*, YOUTUBE, (posted April 19, 2013) http://www.youtube.com/watch?feature=player_embedded&v=Ts2MECcU7D8 ").

And in an email dated September 25, 2012, the Acting Chief Executive Officer of TCA assured the Coalition, "***You will have plenty of notice*** before any decisions are made." (*See* Email from Lisa Telles to Stefanie Sekich, Sept. 25, 2012 (emphasis added), attached hereto as Exhibit B.)

In addition, by letter dated March 8, 2013, I specifically requested on behalf of the Coalition a mailed and electronic copy of *any notice* issued by the TCA for the Tesoro Extension Project. (*See* Letter from Peter Miljanich to Patty Romo, March 8, 2013, attached hereto as Exhibit C.) No such notice was provided in advance of the April 18 Special Meeting.

Unfortunately, TCA appears to be following a pattern of non-disclosure in connection with this project. The CEQA Addendum was first made available—on the website of the Regional Water Quality Control Board—on February 19, 2013, less than one week before the close of the comment period on the Water Board's consideration of the Tesoro Extension. On February 22, 2013, I requested that TCA provide the Coalition with copies of the traffic analyses relied upon in the CEQA Addendum. Without any credible justification and contrary to the requirements of the California Public Records Act, TCA did not provide those documents until March 12, 2013, the day before the Water Board's public hearing regarding the Tesoro Extension. TCA failed to provide any other meaningful opportunity for the public to comment on these documents.

TCA must rescind its April 18 approvals and re-notice a meeting for a later date, in order to provide the public with the full and fair opportunity to participate that TCA has repeatedly promised.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Peter R. Miljanich

cc: Brian Hembacher, Office of the Attorney General, Deputy Attorney General
Robert Thornton, Nossaman LLP

471651.1

EXHIBIT A

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Road, which is planned to run parallel to Ortega Highway and will be the area's major east-west arterial roadway with two to three lanes in each direction and will carry 30,000 trips per day in 2035.

- At a future date -- and when the adjacent local transportation system is complete in the unincorporated area north of Ortega Highway and east of Antonio Parkway -- a permanent SR 241 interchange will be built at future G Street.

ENVIRONMENTAL DETAILS:

Environmental analysis of the project area was analyzed within the Subsequent Environmental Impact Report (SEIR) in 2006. According to the SEIR, all environmental impacts are minimal and can be successfully mitigated. As with all TCA projects, design features include construction of three wildlife crossings.

Environmental work required for the project includes:

- Addendum to the SEIR certified in 2006
- Traffic Study
- California Department of Fish & Game 1602 Streambed Alteration Agreement Update
- Regional Water Quality Control Board 401 Certification
- US Army Corps of Engineers 404 Permit
- US Fish and Wildlife Service Biological Opinion

After the traffic and environmental analyses are completed, there will be a public review period for the Environmental Impact Report addendum and public workshops. Click here to learn more about our environmental initiatives.

TAKE ACTION

Yes, please send me updates on the 241.

First Name

Last Name

Email Address

Submit

Email your representative NOW!

Email

VIDEOS

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EXHIBIT B

Sean P. Mulligan

From: Bill White
Sent: Monday, April 22, 2013 1:22 PM
To: Peter R. Miljanich
Subject: FW: Email from TCA about public process.

fyi

From: Stefanie Sekich [mailto:ssekich@surfrider.org]
Sent: Thursday, April 18, 2013 5:27 PM
To: Peter R. Miljanich; Dan Silver; Damon Nagami; Michael Fitts; cbrown@resourceslawgroup.com; Angela Howe
Cc: Bill White; Edward T. Schexnayder
Subject: Email from TCA about public process.

Read from bottom up.

From: Stefanie Sekich
Sent: Tuesday, September 25, 2012 3:12 PM
To: Telles, Lisa
Subject: Re: Oct meeting.

Thanks for speedy reply! I imagine you're busy so I appreciate your response and commitment to a public process.

All the best,

Stefanie Sekich-Quinn
Surfrider Foundation
California Policy Manager
Ssekich@surfrider.org
619-807-0551

On Sep 25, 2012, at 3:04 PM, "Telles, Lisa" <ltelles@thetollroads.com> wrote:

> Hi Stefanie,
> There won't be a vote in October. The permitting and environmental process is taking longer than originally anticipated. You will have plenty of notice before any decisions are made.
>
> Please keep in touch. I'll still be available -- just wearing more hats.
>
> Lisa Telles
>
>
>
> -----Original Message-----
> From: Stefanie Sekich [mailto:ssekich@surfrider.org]
> Sent: Tuesday, September 25, 2012 2:28 PM
> To: Telles, Lisa
> Subject: Oct meeting.
>
> Hi Lisa,
>
> Congrats on your new position. I imagine, you're busy, but have a quick question....
>

> I know the Foothill Eastern Board was planning to vote on the plans for the Tesoro Ext at the meeting in October. Is that still going to happen?
>
> Thanks in advance for your response.
>
> Best,
> Stefanie
>
> Stefanie Sekich-Quinn
> Surfrider Foundation
> California Policy Manager
> Ssekich@surfrider.org
> 619-807-0551
>
>
>

EXHIBIT C

SHUTE, MIHALY & WEINBERGER LLP

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T: 415 552-7272 F: 415 552-5816
www.smwlaw.com

PETER R. MILJANICH
Attorney
miljanich@smwlaw.com

March 8, 2013

Via E-Mail and U.S. Mail

Ms. Patty Romo
Administrative Services
Transportation Corridor Agencies
125 Pacifica, Suite 100
Irvine, CA 92618
promo@thetollroads.com

Re: California Public Records Act Request and Request for Notice under the California Environmental Quality Act

Dear Ms. Loch:

The Save San Onofre Coalition hereby requests a copy of any Notice of Determination, Notice of Exemption, or any other notice issued by the Transportation Corridor Agencies for the Tesoro Extension Project. *See* Cal. Pub. Res. Code section 21108. Pursuant to Public Resources Code section 21167(f), please send a copy of any such notice to me at the above-listed address. I would also appreciate receiving an electronic copy at this e-mail address: Miljanich@smwlaw.com.

Please also consider this letter a request pursuant to the California Public Records Act, Gov't Code section 6250 et seq., and Article 1, Section 3 of the California Constitution (collectively "PRA"), for copies of any Notice of Determination, Notice of Exemption, or any other notice previously issued by the Transportation Corridor Agencies for the Tesoro Extension Project.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Peter R. Miljanich