STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place Suite 101
San Luis Obispo, CA 93401-7906

March 15, 2012, Item 18
Staff Report Attachment 6

PUBLIC COMMENTS AND STAFF RESPONSE

Water Board staff received comments from:

1. Richard E. Adam of Santa Maria in a letter dated December 1, 2011, and received via fax on December 2, 2011.
2. County of Santa Barbara Public Works Department, Project Clean Water as an email attachment received December 13, 2011.
3. Fred Chamberlin of Los Olivos and on behalf of the Santa Barbara County Cattlemen's Association via mail and received on December 13, 2011.
4. County of San Luis Obispo, Department of Public Works, as an email attachment received December 14, 2011.
5. City of Guadalupe as an email attachment received December 14, 2011.
6. University of California, Agriculture and Natural Resources, San Luis Obispo County Cooperative Extension as an email attachment received December 15, 2011.
7. City of Santa Maria as an email attachment received December 15, 2011.
8. Brownstein, Hyatt, Farber, Schreck on behalf of Santa Barbara County Cattlemen's Association as an email attachment received December 15, 2011.
9. Ron Davis, cattle foreman, Rancho Sisquoc/Flood Ranch as an email attachment received December 15, 2011.
10. Mark Adam, La Brea Ranch owner, as an email attachment received December 15, 2011.
11. Janet Parrish, USEPA as an email attachment received December 15, 2011

Staff responses to these comments are provided below. All comments are direct transcriptions from the letters.

List of Acronyms and Abbreviations

This document contains several acronyms and abbreviations. In general, staff wrote an acronym or abbreviation in parentheses following the first time a title or term was used. Staff wrote the acronym/abbreviation in place of that term from that point throughout this report. The following alphabetical list of acronyms/abbreviations used in this document is provided for the convenience of the reader:

CCAMP	Central Coast Ambient Monitoring Program
FMMP	Farmland Mapping and Monitoring Program
FIB	Fecal Indicator Bacteria
MPN	Most Probable Number (an analytical unit for measuring bacteria concentrations)
MS4	Municipal Separate Storm Sewer System
NASS	National Agricultural Statistics Service (U.S. Dept. of Agriculture)
NPS	Nonpoint Source
REC-1	Water Contact Recreation
REC-2	Non-contact Water Recreation
SED	Supplemental Environmental Document
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Water Board	California Central Coast Regional Water Quality Control Board
WDR	Waste Discharge Requirements
WWTP	Waste Water Treatment Plant

Comments and Responses

#1 Richard E. Adam of Santa Maria

Comment 1.1

This letter is in regard to and for the record of the Project Report for the Total Max Daily Load for Fecal Indicator Bacteria for the Santa Maria Watershed. I believe that this report, prepared 1 November 2011, is somewhat lacking and misleading in several ways.

The report indicates that the Santa Maria River Estuary (actually a fresh water lake) contains edible shellfish and thus should be held to a higher standard. I believe this is not the case, as there is no edible shellfish in the Santa Maria River Estuary. In addition, a heavy population of coots resides in, and contributes to degradation of those waters as well as proximity to the Guadalupe Sewer Plant.

Staff response

The report indicates that the Santa Maria Estuary is designated with a shellfishing beneficial use. The report does not include any information that the Santa Maria River Estuary currently contains edible shellfish. However, the Santa Maria Estuary is a natural estuary that flows to the Pacific Ocean, where at the confluence, information available to the Water Board indicates that individuals may have collected and consumed shellfish. As a result the Santa Maria Estuary is designated as having the beneficial use of shellfishing, and federal and state law requires that the shellfishing beneficial use be protected and that the water body meet water quality standards that protect for shellfishing. With regards to the heavy population of coots, the Water Board does not hold any individual or agency responsible for natural wildlife contribution of fecal indicator bacteria (FIB). Should the Water Board find that coots alone are responsible for the degradation of water quality in the Estuary, the Water Board will proceed with either a site-specific objective or other means of addressing the situation.

The Guadalupe Sewer Plant is approximately three miles away from the Estuary and does not discharge directly to a surface water body. It is unlikely that land-applied effluent would contribute to elevated levels of bacteria at the Estuary, excepting an incidental sewage spill from the plant. However, spills or any direct discharge to a surface waterbody would present a risk. Staff mentioned that spills from the Guadalupe Waste Water Treatment Plant (WWTP) were a potential episodic source of FIB to the watershed and should be addressed immediately through the city's waste discharge requirements.

Comment 1.2

In an attempt to duplicate your figures as presented I find that some reference were dry, and other references had no substantiation of the amount of water that might have been present, and would influence the study, and most seem to be greatly outdated.

Staff response

Staff has evidence that many growers in the Santa Maria area have reduced or eliminated their tailwater in recent years (CCAMP). Therefore the commenter's assertion that some sites were dry seems likely. CCAMP took flow measurements at sampling station 312SMA from 2005-2009 and found that the average flow was significantly less in 2008 as compared to 2007.

With regards to the commenter's statement about the data being greatly outdated, CCAMP last took water quality samples throughout the Santa Maria River watershed in early 2008, and continues to collect samples from the Santa Maria River Estuary monthly. CCAMP takes flow measurements every time they take a sample. CCAMP plans to sample in the Santa Maria River Watershed again in 2013. If the commenter would like more information on sampling values as related to flow, staff encourages the commenter to look at Appendix E, Load Duration Curves, which graphically display the concentration of samples as compared to the flow present during the time of collection.

Comment 1.3

No documentation is provided as to how much human water contact is present in these waterways, how much the normal background FIB may be present, and how or if all domestic sources can be economically handled. As a matter of fact, I personally recognize the location of page 49, Fig. 17 (Cuyama) and it is an irrigated flat some distance (approx. ½ mile) from the Cuyama River.

Staff response

Mr. Adam correctly states that no documentation is provided as to how much human water contact is present in these waterways. Staff did not study the frequency of water contact in the Santa Maria Watershed. However, staff did evaluate that the waterbodies in this watershed are accessible to the public in many areas. An exception is the Santa Maria River at certain locations where the River is levied. All the waterbodies within this TMDL report are designated as having contact recreation as a beneficial use. Background FIB is certainly present in all locations. Staff attempted to quantify the background (wildlife) component and estimated that the wildlife contribution was approximately 3% of the contribution within the watershed (see Figure 14 in the Project Report). With regards to Figure 17, the intent of the photo was to show that horses are present in the Cuyama and not to show that those two particular horses would be contributing to FIB in the Cuyama at such a distance. Staff added language to the Figure 17 caption in order to clarify this point.

Comment 1.4

Please be more specific as to the expectations regarding animal producers excluding stock from waterway, in particular above Twitchell Dam, and legal implications of an above grade discharger to a lower elevation property. You may not be aware that the domestic animal population in the Santa Maria River drainage area may be the smallest in over 100 year, as all of the dairies and cattle feed lot operations have closed. Wild sources, such as feral pigs, deer, birds, and human sources such as sewer plants and road drainage are a likely source of additional FIB.

Staff response

Staff clarified language in the implementation section of the report to be more specific as to the expectations regarding animal producers. Staff agrees that wild sources and human sources are a likely source of FIB.

With regards to the feral pigs, staff recognizes that these are non-native, invasive animals. The pigs cause adverse environmental impacts on sensitive species. Water Board staff is fully supportive of growers' and ranchers' reducing the population of these animals. For more information, please see Department of Fish and Game's website at http://www.dfg.ca.gov/wildlife/hunting/pig/.

Comment 1.5

Please refine your report to bring it up to date, accurate, economical, and pertinent to the stake holders and citizens.

Staff response
Staff revised a portion of the implementation plan to clarify expectations of land owners/operators and municipalities with regards to compliance with the TMDL load allocations and wasteload allocations. CCAMP will collect more data watershed-wide in 2013, which will aid in bringing the Project up-to-date watershed-wide. Staff identifies sources of funding for those individuals with grazing on their property. Staff also encourages others to conduct their own sampling in order to supplement Water Board sampling if they wish.

#2 - County of Santa Barbara Public Works Department, Project Clean Water

Comment 2.1
Thank you for the opportunity to comment on the Resolution (R3-2012-0002), Draft Project Report (November 1, 2011), and draft environmental document concerning the Total Maximum Daily Load (TMDL) for Fecal Indicator Bacteria (FIB) in the Santa Maria River Watershed. Clean water is important to Santa Barbara County and our goal is to implement a science-based approach to finding effective and efficient methods of improving storm water quality. The County offers the following comments in the spirit of improving the effectiveness of the TMDL regulations and ensuring that the overall implementation approach is cost-effective and appropriate.

An overarching concern of the county is that the proposed TMDL will put in place standards that are not based on sound science and are unattainable because they are beyond the control of the public entities that are accountable through existing regulatory mechanisms. Specific comments are outlined below.

Staff response
Staff's responses to specific concerns are described below.

Comment 2.2
The current bacteria TMDL approach uses standard indicators (FIB) to assess water quality and develop implementation plans. The result of taking an approach using indicator bacteria concentrations exclusively is that implementation plans will focus on reducing indicator bacteria numbers first and foremost, rather than reducing the risk to human health. As noted in the scientific peer review, "FIB measured in the absence of a point source release of fecal pollution does not have a strong correlation with the incidence of illness or disease in humans." The peer review further notes that unpublished California studies indicated that in-stream sources are likely a significant source of FIB. The problems with the use of the FIB approach are well documented.

Staff response
Implementation plans should be focused on reducing any fecal contribution first and foremost (through management measures) and addressing the indicator bacteria

numbers secondarily. Staff revised language in the implementation plan to clarify this for stakeholders (please see sections 6.2.1.1 through 6.2.1.3). Regarding the peer reviewer's comments, staff agrees that in-stream sources are likely a source of FIB. While staff has read some studies that indicate mixed conclusions regarding FIB, USEPA in a recently released draft report (2011) maintains that elevated *E. coli* levels are associated with a higher risk of illness. From the draft document: "Although EPA does not have recent epidemiological data on *E. coli* in fresh water, two independent epidemiological studies support the utility of *E. coli* as an indicator as recommended in the 1986 criteria (Marion et al., 2010, Wiedenmann, 2006). A meta-analysis of 27 studies also supports *E. coli* as an indicator in fresh water (Wade, et. al., 2003)." CCAMP includes *E. coli* as part of its ambient monitoring.

Comment 2.3

The indicator bacteria method has been retained because it is cheap, easy to perform, and there has been nothing better available. However, after decades of little progress in addressing water quality nationwide, recent innovations and scientific advances have occurred and the promise of routine use of indicators to correctly identify risks to human health is imminent. The peer review notes that technological advances, along with decreases in cost should allow for monitoring of relevant indicator organisms and bacterial pathogens in the near future. The County urges the Water Board to take into consideration the rapid advancement of science in this field and postpone the Santa Maria River Watershed TMDL until epidemiology studies, indicator development, and new criteria have been released.

Staff response

USEPA maintains that *E. coli* in freshwater is still a valid and appropriate indicator organism (2011). USEPA also discusses in this document that entities may use rapid indicators (qPCR) when quantified against the traditional indicator organisms. The Water Board will continue to take into account new epidemiology studies, indicator development, and new criteria and those methods are incorporated by reference into the TMDL. Should other entities wish to sample the water with other methods, such as microbial source tracking, staff is supportive of other types of sampling. However, this type of sampling is not required by the Water Board.

With regards to postponing the TMDL, staff does not agree that postponement is a valid option. Fecal input into water, whether from human sources or animal sources, presents a human health risk when there is water contact recreation (USEPA 2011).

Comment 2.4

Standards Based on Inappropriate Designated Beneficial Use

The TMDL is based on the Basin Plan's designated beneficial use of Rec-1 and Rec-2 for the Blosser, Bradley and the West Main Street Channels. The County supports the City of Santa Maria's view that these man-made flood control channels are inappropriately designated and that removing them from the TMDL and instead focusing on the Santa Maria River would result in the achievement of real water quality benefits.

Staff response

See response to City of Santa Maria under staff response to Comment 7.1

Comment 7.1

Comment 2.5

Standards Should be Based on the Infrequently Used Recreation Category

Using the EPA's Ambient Water Quality Criteria for Bacteria, the TMDL sets a numeric target for single samples of e-coli based on the lightly used category of 409 MPN/100mL (Draft Project Report page 16). Given that Orcutt Creek and most water bodies in the Santa Maria River watershed are never used for recreation, the appropriate single sample target would be the "infrequently used" category.

Staff response

Staff chose to use the lightly used category because 1) persons (likely children) can come into contact with the water occasionally and children are more susceptible to potential risks than adults, 2) it is consistent with what other Water Board Regions have used, and 3) it is consistent with five USEPA approved TMDLs recently adopted (Arroyo de la Cruz, Cholame Creek, San Antonio River (lower) and Tularcitos Creek) within the Central Coast Region. However, this issue may become inconsequential because USEPA in its 2011 Draft Recreational Water Quality Criteria recommends removing the different use intensities for its revised recreation criteria. Should EPA recommendations remove the use intensities, the TMDL will reflect those changes which would default to the 235 MPN/100 mL as the single sample maximum (or statistical threshold value as the new language proposes). Please see EPA's draft 2011 document for more information http://water.epa.gov/scitech/swguidance/standards/criteria/health/recreation/index.cfm.

Comment 2.6

Even Pristine Watersheds Can't Meet Proposed Recreational Water Quality Standards- Use of Reference Watersheds for Setting Numeric Standards

Many coastal southern California studies have clearly demonstrated that bacteria exceed the recreational water quality standards everywhere, even in pristine "reference" watersheds. In setting the numeric targets for this TMDL, the County requests that the Water Board use a reference watershed approach, similar to the process used in the Los Angeles and San Diego regions.

Staff response

There are several watersheds within the Central Coast Region that are meeting the water quality objectives for *E. coli* and fecal coliform. These watersheds include sites along the Big Sur coastline, including Little Sur, Big Sur River, Big Creek and Willow Creek, Waddell Creek and Scott's Creek located in Santa Cruz County, and the Sisquoc and Huasna subwatersheds, which are part of the larger Santa Maria Watershed. Additionally, the National Park Service collected data from Upper Chalone Creek located in the Pinnacles National Monument, which represents a natural or relatively undisturbed stream reach. One hundred thirteen samples show that this creek is not impaired by *E. coli*.

These creeks achieve the geometric mean of the water quality criteria for *E. coli* and fecal coliform. Staff does not plan to use a reference approach at this time because 1) the standards allow for some flexibility in exceeding the numeric values (using the geomean and no more than 10% may exceed to account for natural variation) and 2) the implementation and monitoring plan is written in such a way that allows for the County to comply with the TMDL through management practices. Using a reference approach in this case would mean that Santa Maria would not be allowed to exceed the water quality objectives they are already held to and would not be beneficial to the responsible parties in this case because the number of times a reference creek exceeds the standards is usually zero. Also, as stated in response to comment 2.2, staff clarified language to make it clearer that responsible parties could show compliance with the TMDL through management practices in combination with monitoring, and not through water column sampling alone.

The reference system approach was developed by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), and was developed as an implementation policy for single sample bacteria water quality objective in the context of a TMDL. This approach identified a certain number of allowable exceedances of the single sample water quality objective for bacteria. A single sample water quality objective is essentially a "do not exceed" objective. Please note, the Central Coast Region Basin Plan Water Quality Objective for fecal coliform (i.e., the proposed numeric target in this TMDL) is not a "never exceed" water quality criteria. The water quality objective of 200 MPN/100 mL is applied as a geometric mean of five samples collected in a 30-day period. This is intended to account for fluxes from storm events or periodic stagnant conditions. It is important to note that, unlike the arithmetic mean, the geometric mean is a statistical function that is less affected by extreme or anomalous values and is useful for evaluating skewed data sets. In short, the TMDL for the Santa Maria project area allows exceedances of the water quality criteria to occur, and in this respect is effectively the same approach as the reference watershed approach the commenter refers to.

Comment 2.7

Can't Meet Standards When We Do Not Control the Sources

Because of the existing NPDES municipal permit program, the TMDL plan is heavily dependent upon urban storm water programs to implement management measures. The County is concerned that the anticipated level of effort required to reduce FIB discharges from urban storm water runoff would not match the expectation that such efforts would improve water quality in the project area enough to meet water quality objectives for bacteria.

Staff response

Urban stormwater is a source of FIB. The proposed TMDL relies on source control primarily (see updated implementation language as mentioned in response to Comment 2.2
) consistent with the requirements of MS4 permits.

Comment 2.8

Can't Meet Standards When We Do Not Control the Sources (cont.)

Data seems to indicate that urban sources are not the major source of bacterial loading in the Santa Maria River watershed. For example, Table 10 from the Draft Project Report shows that only 3.8% of the land use of the project area is urban, and Table 19 shows the fecal coliform contribution from the urban area is 3% in the entire project area (25% in Orcutt drainage). Thus, even large decreases in pollutant loading from management measures implemented by the County would be unlikely to result in measurable improvements to Orcutt Creek. The TMDL should be revised to ensure that public entities are not responsible for discharges that they do not control.

Staff response

While the urban sources make up a smaller area of the watershed, the frequency and level of exceedance are far greater than those exceedances in areas outside the influence of urban areas. Figure 1 lists sites from the lowest geometric mean of fecal coliform to the highest under two categories: sites under urban and/or agricultural influence and sites under grazing influence. As you can see from the figure, urban and/or agricultural sites tend to have higher geometric means than those sites that have more grazing land uses. Staff understands the County's position that they are a smaller percentage of the contribution and should not be responsible for discharges that they do not control. The Water Board does not hold public entities responsible for discharges that they do not control.

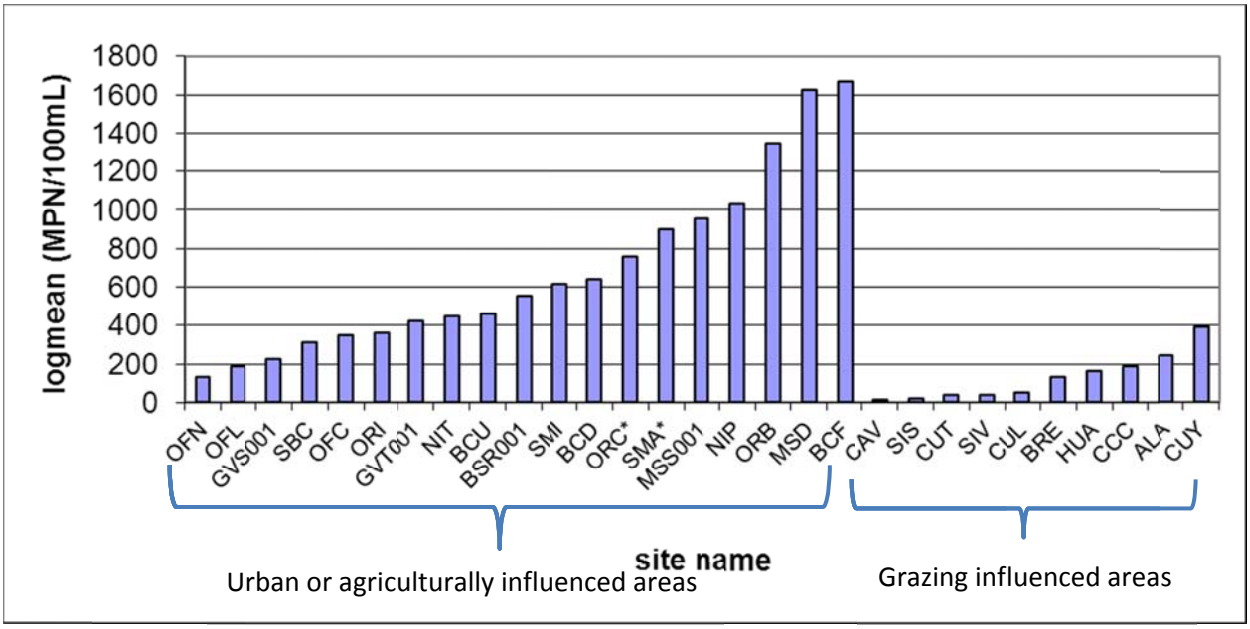


Figure 1: The geometric mean (fecal coliform) of all sites listed from lowest geometric mean to the highest, with urban and/or agricultural area drainages listed first and primarily grazing lands listed second. The data were collected between 2000 and 2008 with most of the data being collected between 2000-2001and 2007-2008. Note that the asterisked sites SMA and ORC are listed under urban or agriculturally influenced sites but also has a grazing component as well. These sites are at the end of the watershed and are a compilation of all sources.

Comment 2.9

Consider Seasonal Variation

The TMDL concludes on page 66 that "allocations and future implementation actions will be assigned year-round, rather than seasonally, to resolve impairment." The TMDL reaches this conclusion even though staff found that "there was a pattern of seasonal variation based on review of the exceedance monitoring data." Given that there was a pattern of seasonal variation, the TMDL should account for wet and dry weather conditions as part of the TMDL.

Staff response

The County is correct that staff found a pattern of seasonal variation based on the exceedance of monitoring data. However, exceedances of water quality objectives were present year-round at all sites. While some monitoring sites were more variable and elevated during the dry season and some sites during the wet season, others did not show seasonal variation. The County and other entities can use these seasonal variations, if present, to help guide the choice of implementation actions. Regardless of the season, numeric objectives are applicable year-round.

Comment 2.10

Receiving Water Monitoring Should Focus on Areas Where Water Contact Occurs

Receiving water monitoring that is performed as part of the monitoring program should be performed only at areas where water contact may actually occur. Sampling must focus on protection of human health, not the removal of all fecal coliform from the water body. The County requests that the Water Board delete the minimum sampling requirement on page 70 of the TMDL and instead provide that receiving water sampling should occur at one site per water body if and only if water contact actually occurs within the water body. Additionally, the monitoring program should focus on BMP effectiveness rather than load reduction in receiving waters, which may not be achievable.

Staff response

Staff does not expect nor propose that all fecal coliform be removed from the waterbodies. The county can propose alternate monitoring strategies during the implementation phase of the TMDL. Monitoring strategies should coincide with a strategy the County develops to achieve their wasteload allocation; that strategy may include receiving water monitoring in all waterbodies the county discharges too, and it may not. That said, the receiving water must eventually achieve water quality standards. Therefore, receiving water quality monitoring is necessary at some point in time, but initial precedence should be given to monitoring progress towards achieving wasteload allocations. Staff added language in the implementation plan to clarify that the implementation program can focus on management measures, in combination with water quality monitoring, in order to show compliance with the TMDL.

Comment 2.11

Compliance Based on Implementing BMPs

Throughout the Draft Project Report Water Board staff acknowledges the difficulties and uncertainties of accurately identifying the sources and delivery potential of fecal coliform bacteria to receiving water bodies. Estimates of various sources are based on a number of assumptions and "approximations derived from literature values or best professional judgment". Given the disparate nature of the area's land uses and the range of potential sources of fecal coliform, the County does not believe the numeric recreational standard of the basin plan can be met in a statistically defensible manner. In fact, the number of "natural" sources and potentially uncontrollable sources suggest that without a more definitive basis for standards, property owners and public entities will be subject to unreasonable regulatory liability under provisions of the CWA that allows citizens' lawsuits. The TMDL regulations will set up dischargers to an unreasonable risk of being sued for non-compliance with standards that cannot be reasonably met or that are out of the control of the parties that are accountable through existing regulatory mechanisms (i.e. Municipal General Permits).

Staff response

Staff modified language in the implementation and monitoring plans to clarify that compliance can be shown through management measures, in combination with monitoring, and do not have to be shown through water quality sampling in receiving waters only. Additionally, the commenter should note that in receiving waters carrying multiple sources of FIB, it would be quite difficult to demonstrate that a responsible party is solely responsible for continued water quality impairment, and, therefore a successful citizen lawsuit would be unlikely. In addition, the waste load allocations in the TMDL are not self-implementing – they must be incorporated into the applicable permit and will include a schedule consistent with the TMDL schedule.

Comment 2.12

For this reason, and consistent with previous bacteria TMDLs in the region, compliance with the TMDL needs to be determined based on implementation of best management practices (BMPs) as specified in the Wasteload Allocation Attainment Plan, rather than based on numeric effluent limits. The County's obligation to meet the wasteload allocation should be met through appropriate implementation of control measures approved by the Regional Water Quality Control Board (RWQCB). The County requests that explicit language be included in Resolution R3-2012-0002 stating that compliance will be attained based on compliance with BMPs in an approved Wasteload Allocation Attainment Plan and to expressly state that the TMDL will be incorporated into the County's NPDES permit through a non-numeric, BMP based compliance standard.

Staff response

Staff appreciates the County’s comment and has added language into the implementation portion of the TMDL to clarify ways MS4s can show they are in compliance with their wasteload allocations. The Water Board cannot expressly state in the TMDL that the NPDES permit will only use non-numeric BMP based compliance

standard. As noted above in response to comment 2.11, the waste load allocations in the TMDL are not self-implementing; they must be implemented in an NPDES permit. The final language in the NPDES permit must be adopted after a public process and any final limits must take into account comments and applicable law and policy at the time of adoption of the permit. The permit, however, must be consistent with the TMDL and therefore, will include a 15 year compliance schedule with interim actions. The method of implementation will be determined when NPDES permits are revised to reflect the adopted TMDL. Federal regulations require that NPDES permits contain requirements necessary to achieve water quality standards (40 CFR § 122.44(d)(1)). Additionally, federal regulations require that water quality based effluent limits are set consistent with the assumptions and requirements of any available waste load allocation for the discharge (40 CFR § 122.44(d)(1)(vii)(B)).

Comment 2.13

CEQA Compliance

The County agrees with the City of Santa Maria's observation that the CEQA Substitute Environmental Document (SED) prepared as part of the TMDL is inadequate in that it fails to analyze project impacts in the areas of agricultural resources, biological resources, land use and planning, population and housing and public services and to consider appropriate mitigation measures to address impacts of the project. The County requests that the Water Board revise the SED to consider these impacts and assess appropriate mitigation measures prior to adoption of the TMDL.

Staff response

Please see response to comment number Comment 7.13B

Comment 2.14

Unfunded State Mandate

In accordance with Article 13B, Section 6 of the California Constitution, the State must provide a subvention of funds when it imposes a new program or higher level of service on a local agency which is not federally mandated. The County reserves its right to file an unfunded mandates test claim with the Commission on State Mandates for all costs of the TMDL that are not mandated by federal law.

Staff response

The requirements of the TMDL are not unfunded state mandates because they do not exceed federal law. TMDLs are required per section 303(d) of the federal Clean Water Act. The federal Clean Water Act and NPDES stormwater regulations provide the Central Coast Water Board with adequate authority for all the requirements found in the TMDL Basin Plan amendment language for this Project.

Article XIIIB, Section 6 of the California Constitution provides, “[w]henever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.” The proposed TMDL does not require subvention for various reasons. First, as a threshold

matter it does not require a new program or higher level of service. The Water Board's adoption of water quality standards for bacteria and the proposed TMDL is a non-discretionary duty required by the federal Clean Water Act, and the challenged provisions are not unique to local entities. Second, the challenged provisions are required by the federal Clean Water Act, its implementing regulations, and federal agency guidance.

Comment 2.15
The County appreciates the opportunity to provide comment and looks forward to working together on implementing a successful and cost-effective TMDL Program. If you have any questions, please don't hesitate to call.

Staff response
Staff appreciates the County's comments and participation in this process.

#3 Fred Chamberlin of Los Olivos and on behalf of the Santa Barbara County Cattlemen's Association

Comment 3.1
This comment letter is submitted on behalf of myself and the Santa Barbara County Cattlemen's Association (SBCCA) regarding the Central Coast Regional Water Quality Control Board's (RWQCB's) proposed amendment to the Water Quality Control Plan for the Central Coast Basin to (1) adopt a Total Maximum Daily Load (TMDL) for fecal indicator bacteria in the Santa Maria River watershed and (2) add the Santa Maria River Watershed (including Oso Flaco Creek subwatershed) to the Domestic Animal Waste Discharge Prohibition (Amendment).

I am very concerned with the scientific integrity of the process of obtaining and analyzing water samples from the various water sources contributing to the Santa Maria River. It is imperative that a representative of the upstream land owners be present at any time that water samples are taken. This is to ensure that the land owners will verify and support that the conditions under which the samples are taken comply with the specified protocols. Specifically, stream flows, and the presence (or the sign of past presence) of wildlife or other indications that the samples taken fairly represent issues that are controllable by the land owners.

Staff response
The Central Coast Ambient Monitoring Program (CCAMP) took all the water quality samples in this watershed. CCAMP follows a rigorous Quality Assurance Quality Control (QAQC) Program and all samples collected follow specific standard operating procedure. Bacteria samples are sampled in sterilized and sealed bottles and analyzed at an independent laboratory. Quality control procedures include collection of blank and duplicate samples.

Staff coordinates with landowners for access when there are samples collected on areas that are not publically accessible. If a landowner would like to be notified in advance of CCAMP sampling at a particular monitoring site, please contact CCAMP staff Mary Hamilton at madams@waterboards.ca.gov. Please see www.ccamp.org for a list of monitoring sites.

CCAMP staff takes photos and records observations during sample collection, which land owners may review. CCAMP staff records stream flows at certain locations and notes if there is human, wildlife, or other animals present during sample collection. See appendix A for CCAMP notes during sample collection.

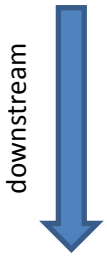
Comment 3.2

A second issue that concerns me is that 'the Cuyama River has been declared impaired but the body of water that it flows into, Twitchell Reservoir, is not. As the Cuyama is the primary source of water in the Twitchell, the degree impairment of the Cuyama must be minimal.

Thank you for your consideration of these comments.

Staff response

You are correct that the Cuyama River has been identified as impaired while the Twitchell Reservoir is not. The Cuyama River is identified as impaired from 312CAV (Cuyama at Highway 33) to the Twitchell Reservoir. Site 312CAV is not impaired, but the downstream site, 312CCC, is. You are also correct in stating that the Cuyama is the primary source of water into the Twitchell Reservoir. The degree of impairment in the Cuyama is not extreme as all the sites in the Cuyama, with the exception of site 312CUY, which is the closest to the Reservoir, meet the geometric mean portion of the water quality objective. While Cuyama qualifies as impaired according to the Impaired Waters Guidance, as you can see from the table below, the degree of impairment is moderate and would not be classified as severe.



	Fecal coliform		*E. coli*	
Site	Geometric Mean	% exceedance of 400 MPN/100 mL	Geometric Mean	% exceedance of 235 MPN/100 mL
312CUL	*	*	NS	NS
312CAV	15	4%	27	11%
312CCC	189	**44%**	112	**40%**
312CUY	**394**	**50%**	*	*
312CUT (below reservoir)	41	9%	*	*

- Bold = identified as impaired (regular font indicates complying with water quality objectives for fecal coliform and/or *E. coli)*
- NS = not sampled
- * = less than 5 samples taken at this location

#4 County of San Luis Obispo, Department of Public Works

Comment 4.1
Thank you for the opportunity to comment on the Regional Water Quality Control Board (RWQCB) Resolution No. R3-2012-002 to amend the Water Quality Control Plan for the Central Coast Basin (Basin Plan) to adopt the Total Maximum Daily Load (TMDL) for fecal indicator bacteria (FIB) in the Santa Maria River Watershed and adding Oso Flaco Creek subwatershed to the Domestic Animal Waste Discharge Prohibition. Upon our review we offer the following comments;

1. The County respectfully requests that the RWQCB set the bacteria TMDL limits based on a reference watershed, like has been done in the LA and SD regions, in acknowledgement that recreational standards are exceeded in even the most pristine watersheds. We also request longer implementation periods for the MS4s, and the continued use of BMP-based wasteload allocations (as opposed to numeric limits).

Staff response
As previously mentioned in staff response to comment number 2.6, there are natural watersheds that are meeting the water quality objective for bacteria. While staff is not proposing to include a longer implementation period for the MS4s, staff did change language in the implementation section to clarify various methods of demonstrating compliance.

Comment 4.2
2. Request the proposed TMDL to be based on studies which can identify the point and non-point sources rather than an arbitrary 'indicator' approach as supported by comments made by the scientific peer review.

Staff response
The Water Board has conducted microbial source tracking in various basins in the Central Coast Region. Staff considered DNA fingerprinting data from the Central Coast Region broadly. These results have widely shown that, with regard to impaired waterbodies, multiple controllable and non-controllable sources are contributing to the impairment (i.e., wildlife, humans, pets, domestic animals, and livestock). Staff also utilized other source analysis methods (e.g. Bacteria Land Source Calculator, Load Duration Curves, Watershed Treatment Model, GIS) for TMDL development.

Indicator approaches are not “arbitrary” and are based on the percent risk of illness after coming into contact with the water. Staff is assuming the commenter means arbitrary in the sense that indicator organisms do not differentiate between animal/human origin.

Please also see response to Comment 2.2
and Comment 2.3

Comment 4.3
3. Please reconsider or justify why the 'lightly used' category was used for Ambient Water Quality Criteria for Bacteria. We suggest the TMDL for Nipomo Creek be based on 'infrequently used' category.

Staff response
Please see response to comment no. 2.5.

Comment 4.4
4. Please confirm and clarify the implementation and compliance with the TMDL will be through a BMP approach.

Staff response
Staff clarified implementation and compliance in the implementation section of the Project Report and Basin Plan amendment language to indicate that compliance may be demonstrated through various methods.

Comment 4.5
5. Please amend the TMDL to expressly state that the TMDL will be incorporated into the County MS4 permit through a non-numeric, BMP based compliance standard.

Staff response
Please see response to comment 2.12.

Comment 4.6
6. Please reconsider or justify the RWQCB assessment of TMDL cost as the County finds the assessment inaccurate. Costs associated with previous development, implementation, monitoring and reporting of Wasteload Allocation Attainment Plans and Stormwater Management Programs to be significantly higher.

Staff response
Section 21159(c) of the Public Resources Code requires that the environmental analysis take into account a reasonable range of environmental, economic, and technical factors; population and geographic areas; and specific sites. The environmental documentation includes a range of costs for the reasonably foreseeable methods of compliance. Cost estimates may or may not be actual, but are reasonable expectations based on the available information. Many of the actions, such as review and revision of policies and ordinances by a governmental agency, could incur no significant costs beyond the program budgets of those agencies. Cost estimates are complicated by the fact that some implementation actions are necessitated by other regulatory requirements (e.g., Phase II Stormwater) or are actions anticipated regardless of TMDL adoption. Therefore assigning all of these costs to TMDL implementation would be inaccurate. If County staff has specific information with regards to their incurring significantly higher costs, Water Board staff encourages the County to submit this information to Water Board staff.

Comment 4.7
7. Please note the County reserves its right to file an unfunded mandates test claim for all costs that are not mandated by federal law in accordance with Article XIIIB, Section 6 of the state constitution.

Staff response
Please see staff response to comment no. 2.14

Comment 4.8
8. The County is concerned that the anticipated level of effort required to reduce fecal indicator bacteria discharges from urban storm water runoff would not match the expectation that such efforts would improve water quality in the project area enough to meet water quality objectives for bacteria. The County questions whether significant decreases in pollutant loading from county implemented management measures would even result in measurable improvements to Nipomo Creek. Please amend the TMDL to ensure the County is not responsible for discharges from areas we do not control.

Thank you for the opportunity to comment on said TMDL. Please call me if you have any questions.

Staff response
As staff mentioned in response to comment no. 4.4, staff added language in the implementation section to clarify that the County is not responsible for discharges from areas in which they do not control. Please also see response to comment 2.8. Fecal input from controllable sources needs to be controlled in order to protect water quality.

#5 City of Guadalupe

Comment 5.1
Thank you for the opportunity to comment on the proposed amendments to the Water Quality Control Plan (Basin Plan). The City of Guadalupe is supportive of the proposed amendments to the Basin Plan relative to improving water quality within the Santa Maria watershed. However, the City is concerned with the financial ramifications associated with implementation of the proposed amendments. As proposed, the City would be required to incur substantial financial costs. The City is concerned that implementation of the proposed amendments would be infeasible without financial assistance. Please consider our financial concerns during the decision making process.

Staff response
The Prop. 84 Stormwater Grant Program and the Integrated Regional Water Management Program are two sources of financing that could assist municipalities with their stormwater programs. Central Coast Water Board staff is committed to working with the City of Guadalupe and providing support during this process.

Staff encourages the City to contact our grants coordinator, Katie McNeill at kmcneill@waterboards.ca.gov, if they desire, regarding this issue.

Comment 5.2
The City is committed to continued coordination with the Water Board, as well as the City's counterparts including the City of Santa Maria, who are preparing a more detailed comment letter, to see that implementation of the proposed amendments is successful.

Staff response
Staff appreciates the City's commitment to continued coordination and staff will continue to work with the City and other counterparts on this issue.

#6 University of California, Agriculture and Natural Resources, San Luis Obispo County Cooperative Extension

Comment 6.1
This letter is in response to the development of the "Total Maximum Daily Load (TMDL) for Pathogen Impairment" in the Santa Maria River watershed. A lot of work went into this TMDL with the intended outcome to protect the water quality. I appreciate the opportunity to make a few comments.

Though there are many points to consider, I would like to focus on a couple of concepts. There is sufficient data to make the determination that this watershed is impaired, but it is limited in both spatial and temporal scales. In the best of circumstances, it is very difficult to make good decisions with the high temporal and spatial variability that exists. At a minimum each stream reach should be sampled before, during and after storm events, and over a period of several years to obtain good quality data (Tate et. al. 1999). This may not be possible to obtain enough data, but as always, the more data there is, the better the interpretation can be. I would hope that this data collection may continue and improve, thus providing more information which will shed more light on what the "actual sources" causing the impairments are.

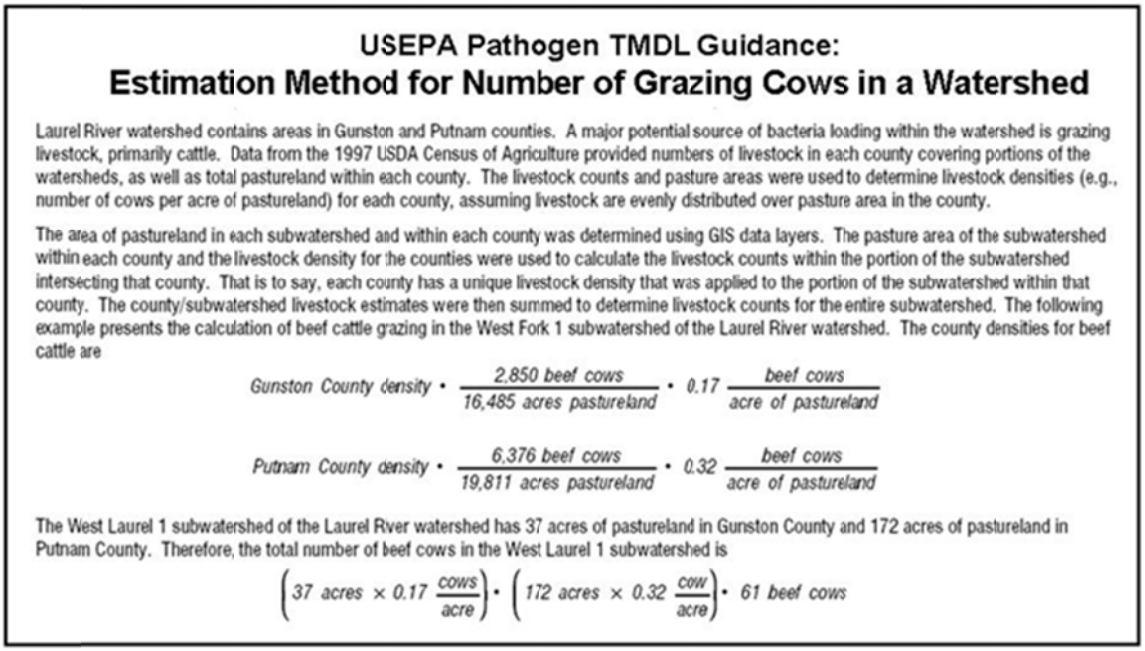
Staff response
Staff agrees that while there are sufficient data to determine impairment, data are limited in both spatial and temporal scales. Under ideal circumstances, it would be informative to have more data and sampling before, during and after a storm. CCAMP will have another rotation in the Santa Maria Watershed in 2013 that will add to the Water Board's collection of data. Staff encourages others to gather data in order to better assess the watershed.

Comment 6.2
I agree that livestock can be a problem. However, for this TMDL, livestock are listed as having over 84% of all possible fecal coliforms in this watershed. I believe the wildlife numbers are low, and rodents are not even estimated. This could be a concern, for example the California ground squirrel, has large populations in this area. This is of interest because they tend to be near streams. Most of the streams in this area are

intermittent, and the squirrels tend to burrow right into the stream banks, yet they are not even mentioned, as well as other rodents. Currently, the information about rodents and other wildlife, especially for concern of water quality and food safety reasons, is increasing as indicated by studies such as those by Mandrell et. al. 2010, Gorski et. al. 2010, and Jay-Russell et. al. 2010. The estimated population of livestock is very high. The method of generalizing cattle numbers used in this TMDL is not the best approach. Livestock numbers are not evenly distributed across the each of the counties. For example, forage production varies by rainfall zone, please see figure 1 which is attached to this letter. Therefore the higher the rainfall zone, the more cattle each acre can support. The majority of the Santa Maria River watershed is in a low rainfall zone, hence may require greater than 30 acres to support 1 cow for 1 year. When including the shrub/scrub portion in the range/pasture acreage, it may take more than 30 acres to support 1 cow for 1 year. The range and pasture on the coastal side of each county takes a lot less acres to support 1 cow for 1 year.

Staff response

As documented in the Project Report staff used an USEPA-recommended method for estimating livestock numbers in the Project Area. This method is commonly used in pathogen TMDL development (for example, Mississippi Dept. of Environmental Quality, 2000; Oklahoma Dept. of Environmental Quality, 2006; Montana Dept. of Environmental Quality, 2009). The method is also used by academic researchers involved in water quality studies (for example, Gibson, 2005). The method involves deriving estimated average stocking density (livestock/acre) using County livestock numbers available from the USDA National Agricultural Statistics Service (NASS), in conjunction with land use data. NASS provides census inventories of livestock and farm animals on a county-wide basis. For the sake of additional clarity and for ease of reference, staff provides a direct transcription of the USEPA-recommended method from USEPA (2001).



USEPA Pathogen TMDL Guidance:
Estimation Method for Number of Grazing Cows in a Watershed

Laurel River watershed contains areas in Gunston and Putnam counties. A major potential source of bacteria loading within the watershed is grazing livestock, primarily cattle. Data from the 1997 USDA Census of Agriculture provided numbers of livestock in each county covering portions of the watersheds, as well as total pastureland within each county. The livestock counts and pasture areas were used to determine livestock densities (e.g., number of cows per acre of pastureland) for each county, assuming livestock are evenly distributed over pasture area in the county.

The area of pastureland in each subwatershed and within each county was determined using GIS data layers. The pasture area of the subwatershed within each county and the livestock density for the counties were used to calculate the livestock counts within the portion of the subwatershed intersecting that county. That is to say, each county has a unique livestock density that was applied to the portion of the subwatershed within that county. The county/subwatershed livestock estimates were then summed to determine livestock counts for the entire subwatershed. The following example presents the calculation of beef cattle grazing in the West Fork 1 subwatershed of the Laurel River watershed. The county densities for beef cattle are

$$\text{Gunston County density} = \frac{2{,}850 \text{ beef cows}}{16{,}485 \text{ acres pastureland}} = 0.17 \frac{\text{beef cows}}{\text{acre of pastureland}}$$

$$\text{Putnam County density} = \frac{6{,}376 \text{ beef cows}}{19{,}811 \text{ acres pastureland}} = 0.32 \frac{\text{beef cows}}{\text{acre of pastureland}}$$

The West Laurel 1 subwatershed of the Laurel River watershed has 37 acres of pastureland in Gunston County and 172 acres of pastureland in Putnam County. Therefore, the total number of beef cows in the West Laurel 1 subwatershed is

$$\left(37 \text{ acres} \times 0.17 \frac{\text{cows}}{\text{acre}}\right) + \left(172 \text{ acres} \times 0.32 \frac{\text{cow}}{\text{acre}}\right) = 61 \text{ beef cows}$$

From: USEPA (2001), Protocol for Developing Pathogen TMDLs (EPA 841-R-00-002)

With regards to other wildlife not included in Table 13, staff included a category for "other wildlife" and assumed an equivalency to all deer in the project area. While staff did not call out the California ground squirrel specifically, the squirrel, and other wildlife (not including birds because there was another category for unknown birds) not specifically mentioned in Table 13 were assumed to be equivalent to the number of deer in the watershed. Since deer are large mammals, staff concluded this was a reasonable assumption.

Staff performed a sample calculation to address this comment and doubled the entire wildlife population and halved the cattle population and compared it to the other sources. Even under this scenario which likely overestimates wildlife contribution and underestimates livestock contribution, wildlife contribution would account for approximately 9% while livestock still accounts for 70%.

Comment 6.3
In addition, I am not sure that the watershed in question could even meet the current standard of REC1, even if all the cattle were removed completely, because of wildlife. It would take a lot more sampling and in more locations, to arrive at that conclusion.

Staff response
Please see response to comment 2.6.

Comment 6.4
I know this was a big undertaking, of which much good has been done. I appreciate your efforts. But I encourage the staff to continue to work with the cattlemen, and other agencies like UC Cooperative Extension, Farm Bureau, RCD's, NRCS, and others, to

continue to refine this TMDL. Since these TMDLs are a process that will have enforceable decisions that will affect the lives of many ranchers, the information should be as accurate as possible. I know the cattlemen are in favor of improving water quality, but it has to be in a way that is possible to achieve, and in the spirit of cooperation.

Staff response
Staff appreciates your comments and your help throughout the development of this TMDL. Staff is committed to working with all agencies mentioned as well as all landowners and operators affected by this TMDL.

#7 City of Santa Maria

Comment 7.1
Thank you for the opportunity to comment on the Central Coast Regional Board's (Regional Board) proposed amendment to the Water Quality Control Plan for the Central Coast Basin (Basin Plan) to adopt a Total Maximum Daily Load (TMDL) for fecal indicator bacteria (FIB) in the Santa Maria River Watershed. Based on a review of the TMDL and related documents, the City of Santa Maria (City) submits the following comments:

1. The Blosser Channel, the Bradley Channel and the Main Street Canal Should Not be Included in the TMDL Until a Use Attainability Analysis (UAA) is Completed.

The United States Environmental Protection Agency (EPA) has stressed that a key element of the TMDL process must be an assessment of the attainability of the underlying water quality standards for the waters in question. EPA has recognized that implementing unattainable uses does not advance actions to improve water quality, and actually undermines improved water quality because it reinforces the public perception that water quality goals are incorrect. As EPA has noted, "[o]ne way to achieve efficiency in the process of assigning attainable designated uses is to better synchronize UAA analyses with the TMDL process."

The Basin Plan's (and the TMDL's) treatment of the Blosser Channel, the Bradley Channel and the Main Street Canal, and the assignment of Rec-1 and Rec-2 standards to these man-made flood control channels is not appropriate. These three flood control channels were constructed in or about the 1960s in areas where no previous watercourse existed. The three channels are fully or partially concrete, and receive a significant amount of agricultural discharges. They are not open to the public and are not (and have not been) used for recreational purposes. It is not legitimate to assign, nor is it attainable to achieve, a Rec-1 or Rec-2 standard for these three channels.

For these reasons, the Regional Board should conduct a UAA for these three channels prior to moving forward with the TMDL as to them. Removing these three channels from the TMDL and conducting a UAA now would be appropriate and consistent with

EPA's guidance regarding the importance of proper use designations for the development of TMDLs that will achieve real water quality benefits and foster public support for water quality improvement efforts. This approach would also save all parties time and money by focusing the efforts of the TMDL on the Santa Maria River rather than diverting the focus of implementation efforts to three man-made channels.

On page 64 of the TMDL, the Regional Board acknowledges that the City has already informed the Regional Board of the need to conduct a UAA as to these waters. The Regional Board states that if the City provides the necessary justification and documentation, staff will adjust the TMDL and allocations accordingly. This deferred approach is not consistent with the EPA guidance discussed above. Rather than rushing forward with the TMDL as to these three channels, the Regional Board should work in collaboration with the City to move forward with a UAA for these waters and delay the TMDL as to them until that process is completed.

Therefore, the City requests that the Regional Board remove the Blosser Channel, Bradley Channel, and Main Street Canal from the TMDL and instead commence with a UAA as to them.

Staff response

Staff appreciates the City's concerns regarding beneficial use designations of the Blosser Channel, Bradley Channel, and the Main Street Canal.

The Central Coast Water Board's Basin Plan (1994, chp. 2, pg. 1) states,

> Surface water bodies within the Region that do not have beneficial uses designated for them in Table 2-1 are assigned the following designations:
>
> - Municipal and Domestic Water Supply
> - Protection of both recreation and aquatic life.

The fecal indicator bacteria TMDLs proposed are intended to protect recreational beneficial uses. The Clean Water Act established a national goal of "…water quality which provides for the protection and propagation of fish, shellfish, and wildlife and *recreation* **in and on the water** [emphasis added]…" The REC-1 beneficial use described in the Basin Plan refers to "Uses of water for recreational activities involving body contact with water…" The REC-2 beneficial use refers to "Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water…" The intent of the Basin Plan language for waterbodies that do not have uses specified in Table 2-1 is to provide the protection consistent with the national goals of the Clean Water Act, i.e. for recreation "…in and on the water…" which is consistent with the REC-1 and REC-2 beneficial uses.

With regards to the assignment of REC-1 and REC-2 standards to these man-made flood control channels not being appropriate, staff concludes that the water quality

standards and the beneficial uses assigned to the waterbodies in question are correct. While it may be that Bradley Channel, Blosser Channel, and Main Street Canal were designed to function as drainage systems and are not natural systems, they are nevertheless waters of the state, and therefore subject to the environmental protection described above. Additionally, these waterbodies/drainage channels eventually flow into the Santa Maria River. Staff notes that these waterbodies are open drainages, i.e., they are accessible for public contact, and in some cases have downstream receiving waters where water contact and non-contact recreation is probable, e.g. Bradley Lake. Staff understands the City's position that Bradley Channel, Blosser Channel and the Main Street Canal were constructed channels and are not natural waterbodies. However, there is likely contact recreation in these channels because it is feasible that individuals (likely children) would either cross the channel and/or have access to play in these channels in certain reaches. For example, Blosser Channel before it enters the Santa Maria River is accessible and next to a housing development where children might be playing.

It is important to note that the Santa Maria River is the downstream receiving waterbody and is assigned the REC-1 and REC-2 beneficial uses in Table 2-1 of the Basin Plan. Consequently, even if the recreational beneficial uses were not assigned to Bradley Channel, Blosser Channel, and Main Street Canal, the City would nevertheless need to address FIB loading into these channels in order to protect recreational beneficial uses in the Santa Maria River.

Regarding the Water Board's taking a deferred approach and not being consistent with USEPA guidelines, staff maintains that a UAA is not justifiable in this situation and does not want to spend resources on an issue that is not defensible. This is the reason staff indicated that if the City wanted to pursue a UAA on its own and bring it back to Water Board staff so that we may review the documentation, that action is the City's prerogative. Even if the City drafts a UAA, staff can only recommend approval by the Central Coast Water Board if it is legally defensible.

Water Board staff is not opposed to writing UAAs when scientifically and legally justifiable. Staff has written three UAAs that proposed de-designation of the shellfishing beneficial use in the Watsonville Sloughs (including Harkins, Gallighan, Hanson, and Struve), Soquel Lagoon, and San Lorenzo River Estuary and presented these to the Central Coast Water Board. The Central Coast Water Board approved all three of these proposed de-designations. The USEPA only approved Watsonville Slough de-designation and "took no action" on San Lorenzo Estuary and Soquel Lagoon.

In terms of "rushing" into this TMDL, staff finds this assertion to be misleading. Staff has been working with the City and the public on this TMDL since September 2003 (see Project Report Section 6.8 – Public Participation for a description of public outreach associated with this TMDL). Water Board staff appreciates all the time, help, and coordination City staff has provided the Water Board.

Comment 7.2

2. The TMDL Lacks a Sound Scientific Basis to Support its Adoption.

Establishment of a TMDL is a quasi-legislative, scientific-evidence-based administrative action that must be based on credible scientific data, or else the loading established in the TMDL will be arbitrary and capricious. As even the scientific peer review comments to the TMDL acknowledge, "FIB measured in the absence of a point source release of fecal pollution does not have a strong correlation with the incidence of illness or disease in humans." The peer review further notes that unpublished California studies indicate that in-stream sources are likely a significant source of FIB. The problems with the use of the FIB approach are well documented, as the studies contained in the following EPA website demonstrate:
http://water.epa.gov/type/rsl/monitoring/vms511.cfm.

Despite this recognized scientific uncertainty, the TMDL is based on an out-dated FIB measurement approach that the scientific peer reviewer implies may "prove inadequate at predicting public health risks for recreational uses." Rather than moving forward with the TMDL at this time, a better approach would be for the Regional Board to work with potential point and non-point sources to coordinate appropriate scientific studies that would actually support the adoption of a TMDL. In the absence of such viable information, the Regional Board's adoption of the TMDL is not supported by a sound scientific basis.

A second problem regarding scientific basis for the TMDL is the lack of relevant data to support its adoption. The data sets available are not robust. More importantly, the data sets are not correlated with locations known to be used recreationally. The City is unaware of any documented instances of water-borne illness in water bodies to which the City discharges. For these two reasons, the data sets do not provide sufficient scientific support for the adoption of the TMDL at this time. Again, a better approach would be for the Regional Board to work with potential point and non-point sources to develop the data necessary to adopt a scientifically justifiable TMDL.

On page 64 of the TMDL, the Regional Board states that it will consider adjusting the TMDL and associated numeric targets and allocations in the event that it concludes that uncontrollable sources of FIB and/or total coliform are causing exceedances of water quality objectives and guidelines. Rather than taking such a "cart before the horse" approach, the Regional Board should refrain from adopting the TMDL until it better understands the nature of the problem it is trying to solve.

Therefore, the City requests that the Regional Board delay adoption of the TMDL until a sound scientific basis for the TMDL is prepared in collaboration with both point and non-point sources.

Staff response

Staff acknowledges that the use of indicator organisms is not perfect. Nevertheless, the TMDLs are developed to achieve water quality standards, and the water quality

standards include indicator organisms. Additionally, USEPA is currently reviewing its recommendations of water quality standards for inland surface recreational waters; the draft recommendation includes indicators such as *E. coli*. Finally, note that the website referenced in the comment does not discuss studies that document problems with FIB. Instead, it talks about indicator organisms and recommends using *E. coli* and enterococcus. *E. coli* was one of the indicator organisms analyzed in this watershed.

Regarding the lack of relevant data to support the TMDLs adoption, according to the Impaired Waters Guidance, staff had enough data to list these waterbodies on the Clean Water Act 303(d) list. Staff agrees that it is always better to have more data and more recent data, but TMDLs are still required where there is uncertainty and in this case the data support listing as set forth in the Water Quality Control Policy for Developing California's CWA Section 303(d) list (2004).

Regarding instances of waterborne illness, Atwill (2011) recently released a study that found two positive samples for *E. coli* 0157:H7 in the Santa Maria River Estuary. Additionally, the Santa Maria River had the highest prevalence of *Salmonella* and the highest concentrations of *Salmonella* as compared to 23 other river, creeks, or estuaries in the Central Coast Region that were sampled in the study. Staff acknowledges that the Santa Maria River Estuary is outside of the City limits, but staff is responding to the City's comment of, "*The City is unaware of any documented instances of water-borne illness in water bodies to which the City discharge,"* since the City does discharge to the Santa Maria River. Staff does not have documented instances of water-borne illness within the City limit nor is staff indicating that the City's discharge is the reason for the high prevalence of *Salmonella* or *E. coli 0157:H7*. Staff is acknowledging that the Santa Maria River Estuary has not only high levels of FIB, but documented positive samples of two confirmed disease causing bacteria.

Staff has been working on this project, with stakeholders, for close to nine years and does not recommend delaying adoption of the TMDL. While the peer reviewer mentioned potential "problems" with indicator organisms, he also stated in his conclusions that, "The proposed measures to reduce allocations from controllable sources are supported scientifically and may be adequate to achieve necessary load reductions and compliance with a mass-based TMDL" (Wuertz 2009).

Comment 7.3

3. The TMDL Should be Based on the Infrequently Used Recreation Category

Table 3, page 16 of the TMDL sets forth EPA's Ambient Water Quality Criteria for Bacteria. The TMDL at page 16 provides that "the TMDL numeric target for single samples is based on the 'lightly used' category of 409 MPN/100mL." Based on the City's previous two comments, which question not only the Rec-1 and Rec-2 designations, but also the scientific basis of the TMDL, the use of the "lightly used" category is not supported. Rather, and at a minimum, the "infrequently used" category

would better reflect both actual uses of the waters in question and the uncertainty of the FIB approach.

Therefore, the City requests that the Regional Board use the "infrequently used" category as the numeric target for the single samples.

Staff response:
Please see response to comment number 2.5.

Comment 7.4
4. The TMDL Should Only Make Entities Responsible for their Own Discharges

The TMDL sets receiving water numeric concentration based targets that are the same as the receiving water concentration requirements of the Basin Plan. As discussed above, and as the scientific peer review acknowledges, many factors account for bacteria in the receiving water. The Regional Board's approach to the TMDL may make entities responsible for point and non-point loading over which they have no control. Because the TMDL is designed to allow entities to reduce their own loading, the Board's approach in the TMDL is not appropriate.

Therefore, the City requests that the Regional Board revise the proposed TMDL to provide that a regulated discharger is responsible only for its own discharges.

Staff response
Staff agrees with the City. Staff modified language in the implementation plan to make it clearer that the City can show compliance with the TMDL through management measures in combination with water quality monitoring for its own FIB sources and does not have to show compliance through receiving water allocations. This is important because the City is downstream of other land uses and they have no control over the quality of this water. Staff appreciates the comment and has made changes to address this issue. Again please note that staff agrees that the City is responsible for its own discharges only; staff has attempted to clarify this in TMDL documents.

Comment 7.5
5. The TMDL Contains no Evidence that the City's Sanitary Sewer Collection System Contributes to FIB Loading

Page 55-56 of the TMDL discusses loading from the permitted sanitary sewer collection systems. The TMDL provides that wastewater from collection systems can reach surface water from sewer line overflows or leaks. The City's collection system is assessed on page 56 of the TMDL. Staff was unable to verify any sewer line overflows from the City's system or from private laterals within the City that reached surface waters. No evidence of sewer leaks is presented.

Despite the absence of evidence that the City's sanitary sewer collection system contributes to FIB loading, the TMDL assigns (for example, at page 3) a waste load allocation for the City's collection system as it relates to the Blosser Channel, the Bradley Channel, the Main Street Canal, and the Santa Maria River. The TMDL at page 69 also includes the City's collection system in a required implementation plan. In the absence of evidence that the City's system is a source of the problem, this inclusion of the City's sanitary sewer collection system in the TMDL is not supported.

Therefore, the City requests that the Regional Board delete the portions of the TMDL relating to the City's sanitary sewer collection system.

Staff response

As stated in the Project Report, there were spills within the City of Santa Maria and three of these spills discharged to a storm drain or were contained within a Santa Barbara County flood control channel. Staff also found reports of spills from private sewer laterals, although none of these discharged to a water body. Staff acknowledges that spills are episodic in nature and do not contribute to the daily loading and are not chronic. Requirements to address these issues are already contained in their Waste Discharge Requirements for the collections system. Staff removed any additional requirements of the City of Santa Maria, Laguna County Sanitation District, and the City of Guadalupe beyond continued compliance with their Waste Discharge Requirements (see section 6.2.3. in the Project Report). Staff also acknowledges that the City of Santa Maria's plant is generally in good working order and when there are spills, staff members are responsive.

Staff looked at a recent CIWQS spill public report – summary page and found that from 2007 to 2010, there were 7,830 gallons of sanitary sewer overflows and 1,600 gallons of that reached a surface waterbody. The percent recovery was 89%. Staff concludes from these data that spills may occur occasionally and that City staff are responding in the appropriate manner to contain and isolate the spill(s). Staff recognizes that sanitary sewer overflows may happen from time to time as is the case with any wastewater treatment plant and their collection system. Staff acknowledges the City's efforts with public outreach and radio spots educating the public about what not to put down their drains in an effort to reduce spills and blockages.

Comment 7.6

6. The TMDL does not Correctly Assess and Account for FIB Loading from Agricultural Sources.

The TMDL appropriately acknowledges on page 27 that the City's "stormwater system is complex because the stormwater within the City's jurisdiction is a mix of agricultural return flows coming into the City from the east and of urban runoff within the City limits." The TMDL also appropriately acknowledges that the City's data show that "flows coming into the City are already above the water quality standard for fecal coliform (logmean of 200 MPN/100mL)."

Despite this information, the TMDL fails to account for irrigated agriculture as a potential source of FIB. This places the City in the unacceptable position of receiving a waste load allocation that cannot be met due to the nature of the flows already coming into the City. The Regional Board should reassess FIB loading from irrigated agricultural sources and establish a waste load allocation for the City that is achievable in light of the condition of the flows coming into the City. At a minimum, the TMDL must be written in such a way that measures the City's compliance through a best management practices approach (BMP), as more fully explained in comments 8 and 9 below.

Therefore, the City requests that the Regional Board revise the TMDL to reassess FIB loading from irrigated agricultural sources and establish a waste load allocation for the City that is achievable in light of the condition of the flows coming into the City.

Staff response

Incoming flows to the City have elevated levels of FIB and the City will not be responsible for this contribution. The elevated levels of FIB adjacent to agricultural fields is a difficult issue to address because of the questions regarding why the levels are elevated. In the Santa Maria area, growers rarely apply manure and from staff research, field workers appear to be using the facilities provided. Staff hypothesizes that the elevated levels of FIB in these fields are due to naturalization of bacteria (Ishii 2006). The waters adjacent to the agricultural fields can be turbid, warmer, and have elevated levels of nutrients. These three factors may provide an environment for bacteria naturalization. Staff does not conclude that irrigated agriculture is a source in this TMDL because there is not a controllable fecal source for agriculture to control.

As mentioned in response to comment no. 7.4, staff revised the implementation language so that it more clearly states that the City can show compliance through a best management approach in combination with monitoring and is not responsible for the quality of water as it enters the City limits.

Comment 7.7

7. The TMDL should Consider Seasonal Variation

The TMDL concludes on page 66 that "allocations and future implementation actions will be assigned year-round, rather than seasonally, to resolve impairment." The TMDL reaches this conclusion even though staff found that "there was a pattern of seasonal variation based on review of the exceedance monitoring data."

A TMDL must take seasonal variation into account. Given that there was a pattern of seasonal variation, the TMDL should account for wet and dry weather conditions as part of the TMDL.

Therefore, the City requests that the Regional Board reconsider the allocations in the TMDL on a seasonal basis.

Staff response
The City is correct in stating that the TMDL must take seasonal variation into account. Staff did find some seasonal variation (see section 5.72 in the Project Report) but concluded that even though some sites had higher FIB levels in the dry season versus the wet season, or vice-versa, there were exceedances year-round. Water quality objectives must be met year round so staff maintains that assigning allocations year-round was the appropriate course of action. Please also see response to comment 2.9.

Comment 7.8
8. The Implementation Plan and TMDL Compliance must be Based on and Measured by a BMP Approach.

Both the TMDL and the scientific peer review acknowledge that the use of FIB for the development of the TMDL is problematic. When coupled with the inappropriateness of a Rec-1 and Rec-2 designation for many of the waters covered by the TMDL, the need for a BMP based approach to compliance with the TMDL is self-evident.

On page 67 of the TMDL, the Regional Board appears to agree that the proper approach to compliance will be a BMP based approach, as reflected in the Wasteload Allocation Attainment Program. The TMDL should more expressly state that implementation of, and compliance with, the TMDL will be through a BMP based approach.

It should also be noted that the TMDL's use of a concentration based approach, rather than a load based approach as suggested by the scientific peer reviewer, further underscores the need to use a BMP based approach. Some approaches to control bacteria, such as removal and treatment, might reduce overall loads, but could even increase concentrations in a given water body. Thus, it is imperative that compliance be measured through BMP effectiveness rather than through numeric standards.

Therefore, the City requests that the Regional Board confirm in the TMDL that implementation of, and compliance with, the TMDL will be through a BMP based approach.

Staff response
Staff confirms that implementation of and compliance with the TMDL can be through a BMP based approach in combination with monitoring. Staff modified language in the implementation section in order to clarify this issue.

Comment 7.9
9. The TMDL Should Only be Incorporated into an NPDES Permit as a Non- Numeric. BMP Based Requirement.

A TMDL is not self-executing, but only becomes enforceable against a particular discharger when incorporated into an enforceable document such as an NPDES Permit.

Page 67 of the TMDL indicates that wasteload allocations of the TMDL will be made enforceable against the City through subsequent incorporation into the City's MS4 permit.

Given the uncertainty regarding the basis for the TMDL and questions about the underlying Rec-1 and Rec-2 designations for many of the waters in question, the TMDL should expressly state that the TMDL will be incorporated into the City's MS4 permit as a non-numeric, BMP based limitation. Such an approach is appropriate and such a use of the BMP based approach has been upheld against legal challenge.

Therefore, the City requests that the Regional Board amend the TMDL to expressly state that the TMDL will be incorporated into the City MS4 permit through a non-numeric, BMP based compliance standard.

Staff response
See responses to comment 2.12, 7.4, 7.6, and 7.8

Comment 7.10
The Monitoring Program should be Focused on BMP Effectiveness.

Page 70 of the TMDL states that staff "is interested in entities showing progress in terms of achieving their load allocation." The TMDL further provides that entities "can show this, in part, through management measures put into place and load reductions calculated through implementation of each management measure."

The City agrees that management measures should be an appropriate basis for demonstrating compliance with the TMDL. However, for the reasons expressed already in this letter, linking management measures to direct load reductions by monitoring in the receiving water will not be achievable. Rather, the monitoring program should be allowed to focus on BMP effectiveness through other means than direct linkage to receiving waters. Given the uncertainty of the science, the concentration based nature of the TMDL, and the condition of the flows upstream of the City, BMP effectiveness should be the primary focus of the monitoring program.

Therefore, the City requests that the Regional Board focus the monitoring program on BMP effectiveness.

Staff response
Staff added language in the implementation section to clarify this.

Comment 7.11
11. Receiving Water Monitoring should be Focused on Areas where Water Contact may Actually Occur

Receiving water monitoring that is performed as part of the monitoring program should be performed only at areas where water contact may actually occur. Sampling must

focus on protection of human health, not the removal of all fecal coliform from the water body.

Therefore, the City requests that the Regional Board delete the minimum sampling requirement on page 70 of the TMDL and instead provide that receiving water sampling should occur at one site per waterbody if, and only if, water contact actually occurs within the waterbody.

Staff response

Staff does not expect or propose that all fecal coliform be removed from the waterbodies. The City can propose alternate monitoring strategies during the implementation phase of the TMDL. Monitoring strategies should coincide with a strategy the City develops to achieve their wasteload allocation; that strategy may include receiving water monitoring in all waterbodies the City discharges too, and it may not. That said, the receiving water must eventually achieve water quality standards. Therefore, receiving water quality monitoring is necessary at some point in time, but initial precedence should be given to monitoring progress towards achieving wasteload allocations. The Water Board is required to protect beneficial uses assigned to waterbodies.

Comment 7.12

12. The TMDL Lacks a Reasonable Assessment of Compliance Costs.

As the TMDL acknowledges on page 72, the Regional Board must take economic considerations into account when establishing pollution control requirements.

In the TMDL, the Regional Board estimates the cost for the City of Santa Maria to comply with the requirements of this TMDL to be anywhere from a 2-percent to a 15-percent annual increase in its current stormwater program costs, plus additional monitoring and reporting costs. The range of this cost estimate is too wide to provide a reasonable estimate of the financial impact on the City. Given that the City, as all cities in the current financial crisis, faces severe budget constraints, any increase in cost is of significant concern.

It should be noted that on page 72, the Regional Board seems to imply that "costs" of not improving water quality through factors such as the impacts to public health, balance out the costs of TMDL implementation. However, as has been stated in this letter, the City is unaware of any documented instances of water borne illness in water bodies to which the City discharges.

Therefore, the City requests that the Regional Board reassess the TMDL after obtaining more accurate cost estimates, and balance those costs against documented public health risks.

Staff response

Section 21159(c) of the Public Resources Code requires that the environmental analysis take into account a reasonable range of environmental, economic, and technical factors; population and geographic areas; and specific sites. Staff used the information available in order to estimate costs of implementing the TMDL. The environmental documentation includes a range of costs for the reasonably foreseeable methods of compliance. The Water Board is not required to conduct a cost-benefit analysis. The TMDL must establish load and waste load allocations with an implementation program to achieve water quality standards so that the water body is no longer impaired.

The purpose of the cost estimate is not to be used to excuse a responsible party from achieving water quality standards, but allows the Water Board to consider appropriate schedules and interim targets to achieve compliance. For those responsible entities that are MS4 permittees, the TMDL will be incorporated into the applicable NPDES permit; implementing parties are required to implement measures to the maximum extent practicable (MEP) with the objective of achieving water quality standards. Therefore, staff will not reevaluate the cost of implementing the TMDL and weigh that cost against the benefit of increased protection to public health, i.e., achieving water quality standards.

The environmental documentation provides a reasonable assessment of the cost of reasonably foreseeable methods of compliance. Generally, the Water Board cannot specify the manner of compliance. Each entity will have to evaluate what implementation actions they will choose to implement and what actions they are already implementing in order to obtain the most accurate cost. Staff has consulted with Water Board storm water staff and also reviewed a USEPA audit of the City of Santa Maria's stormwater program. Additionally, staff has had conversations with the City regarding implementation of their stormwater program and City staff have indicated that the City retains all their dry weather flows. Based on these three interactions/reviews, Water Board staff does not anticipate that the City of Santa Maria will incur many additional costs because they have so many implementing actions in place already. Since the last data were taken in early 2008, the City began implementing their storm water program. Water Board staff anticipate seeing improvements in water quality data as well as improvements in best management practices as compared to 2008. Again, the City is required to implement measures to achieve the MEP standard.

Staff encourages the City to seek funding either through Prop. 84 funding and/or Department of Water Resources Integrated Regional Water Management Grants. Staff encourages the City to contact our grants coordinator, Katie McNeill at kmcneill@waterboards.ca.gov, if they desire.

Comment 7.13A
13. Other Technical and Legal Comments
A. Use of Geometric Mean

EPA originally intended the use of the geometric mean as a tool to determine the condition of a water body over a longer period of time and to detect chronic problems. EPA has stated that "because a geometric mean provides information pertaining to water quality that looks backwards in time, it is not necessarily useful in determining whether a [water body] is safe for swimming on a particular day." EPA has further explained that "it would be technically appropriate to apply the averaging period on a set basis such as monthly or recreational season."

Despite EPA's intended use of the geometric mean, beginning on page 3 and throughout the report, the TMDL appears to propose, at least in part, a rolling 30-day period for calculating the geometric mean. Therefore, the City requests that the Regional Board confirm that a rolling 30-day period is not to be used, but rather the set basis averaging method explained by the EPA.

Staff response

The Water Board is required to implement the water quality objectives and methodologies set forth in the Basin Plan. Note that the water quality standard in the Basin Plan for fecal coliform states that the log mean applies to "any 30-day period." Therefore, staff must implement this method for fecal coliform data analysis. With respect to *E. coli*, as the commenter states, it appears that USEPA has given the states latitude regarding how to assess water quality data using the log mean statistic. Staff agrees that it sometimes makes sense to group data, e.g. during a recreational season. Therefore, staff will work with the City during the development of their wasteload allocation attainment program to determine the averaging period that makes the most sense.

Comment 7.13B

B. CEQA

As the TMDL appropriately acknowledges, the Regional Board must comply with the California Environmental Quality Act when it considers the TMDL through the adoption of a CEQA Substitute Environmental Document (SED). Board staff has prepared an SED as part of the TMDL. However, the SED is not sufficient for a number of reasons.

First, the SED fails to properly assess and analyze project impacts in the areas of agricultural resources, biological resources, land use and planning, population and housing and public services. It is reasonably foreseeable that implementation of the TMDL and achievement of the numeric targets in the TMDL will ultimately require changes to agricultural activities that must be studied prior to TMDL adoption. Similarly, it is reasonably foreseeable that compliance with the TMDL will impact biological resources, conflict with land use plans, affect future development of housing, and, due to implementation costs, affect public services. In addition, the SED fails to consider whether implementation of the TMDL will increase the future risk of flooding in the area. These impacts must be fully studied prior to adoption of the TMDL.

Second, the SED fails to consider mitigation measures. The SED merely states that the Regional Board cannot specify the manner of compliance with its orders and therefore

cannot consider mitigation measures. However, the Regional Board regularly does, including in the TMDL, specify the manner of compliance. The Regional Board must therefore consider appropriate mitigation measures to address impacts of the project.

Therefore, the City requests that the Regional Board revise the SED to consider these impacts and assess appropriate mitigation measures prior to adoption of the TMDL.

Staff response

In accordance with the State Water Board's regulations regarding certified regulatory programs and Public Resources Code section 21159, the environmental documentation evaluates the reasonably foreseeable means for compliance. In addition, the regulations require the environmental documentation to include an analysis of the reasonably foreseeable mitigation measures that would minimize any unavoidable significant adverse environmental impacts of the reasonably foreseeable methods of compliance.

People engaged in grazing management activities will likely implement measures to entice livestock away from surface waters and/or reduce the potential of surface runoff to surface waters. This could be accomplished through offsite watering and maintaining a vegetative cover adjacent to surface waters. It is not likely that these practices would result in conversion of agricultural lands nor would they significantly impact biological resources. Staff did not evaluate the conversion of agricultural lands to non-agricultural lands because that is not a reasonable foreseeable method of complying with this TMDL.

Implementing parties reducing loading from stormwater and wastewater collection systems will implement practices in urbanized areas. It is not likely that the reasonable methods of compliance for these parties will result in conversion of agricultural lands to non-agricultural.

With respect to land use planning, staff does not find that any reasonably foreseeable method of compliance will result in physically dividing an established community, induce population growth, or displace people in current housing. Efforts to reduce loading from stormwater and sewage collection systems will likely involve investigation, surveillance, and maintenance of existing systems. Staff does not believe these activities would result in dividing an established community, nor would they result in inducing significant population growth or displace people in current housing; speculation of implementation actions that would result in these effects are beyond reasonable methods of compliance.

It is unlikely that the implementation efforts discussed above would result in significantly affecting hydrology. Therefore, the potential for increased flooding is less than significant. Finally, if the implementing parties considered methods of compliance that would result in increased flooding, staff would deem these methods beyond MEP and would advise the implementing parties find another means of compliance that would not result in flooding.

Staff is required to consider mitigation when mitigation is necessary to reduce a significant impact to less than significant or to no impact. Since none of the reasonable methods of compliance will result in a significant impact, a description of mitigation measures is not required. Staff can, however, suggest that implementing parties utilize methods of compliance that mitigates, i.e., minimizes, environmental impacts of implementation actions.

Comment 7.14C

As noted above, the Rec-1 and Rec-2 standards for many of the waters subject to the TMDL, most notably the Blosser Channel, the Bradley Channel, and the Main Street Canal, are not attainable and are not reflective of any historical or probable future uses of the waters. In fact, these water bodies are not even assigned individual beneficial uses in the Basin Plan, and are instead subject to the "default" uses of Rec-1 and Rec-2.

Water Code sections 13000, 13240, and 13241 collectively require that Basin Plans establish reasonable water quality objectives that are developed in consideration of the following factors, among others: (1) past, present and probable future beneficial uses of water; (2) water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area; (3) economic considerations; and (4) the need for housing within the region. There is no evidence in either the Basin Plan or in the TMDL that the Regional Board has ever considered these factors as to the water quality objectives for the Blosser Channel, the Bradley Channel, or the Main Street Canal. The absence of such evidence demonstrates that the Regional Board has not properly established the water quality objectives that it seeks to implement through the TMDL as to these three channels.

Therefore, the City requests that the Regional Board delete the Blosser Channel, the Bradley Channel, and the Main Street Canal from the TMDL.

Staff response

Please see response to comment 7.1. Also, the commenter is essentially challenging all beneficial use designations described in the Basin Plan. The beneficial uses were designated as a result of the process required at the time of their designation and incorporation in the Basin Plan. Their designation was ultimately approved meeting all legal requirements; hence the current Basin Plan designations. Staff is not required now, in the TMDL, or in the Basin Plan, to describe what that process was. The purpose of the TMDL is to result in protection of designated beneficial uses. This action is not intended to delete beneficial uses.

Comment 7.14D

D. Water Code§§ 13165, 13225(c) and 13267.

Water Code sections 13165, 13225(c), and 13267 require that the costs of investigations and reports associated with water quality control must "bear a reasonable relationship to the need for the report and the benefits to be obtained therefrom." The

TMDL does not include any demonstration that the costs of the reports required by the TMDL bear such a relationship to the need for them and the benefits to be obtained by them. Therefore, the City requests that the TMDL be revised to comply with the requirements of Water Code section 13165, 13225(c), and 13267.

Staff response
A TMDL is not self-implementing. Upon final approval, the Water Board will take further action to implement the TMDL, including revising permits and issuing orders, such as orders under Water Code section 13267. At the time of issuance of such order, the order will include appropriate findings consistent with the applicable legal requirements.

Comment 7.14E
E. Unfunded State Mandate.
In accordance with Article 13B, Section 6 of the California Constitution, the State must provide a subvention of funds when it imposes a new program or higher level of service on a local agency which is not federally mandated. The City reserves its right to file an unfunded mandates test claim with the Commission on State Mandates for all costs of the TMDL that are not mandated by federal law.

Staff response
Please see response to comment number 2.14.

Comment 7.15
The City of Santa Maria appreciates the opportunity to provide comments on this project and looks forward to working with the Regional Board, and the other regulated dischargers affected by the TMDL, on implementing a successful and cost-effective TMDL program.

Should you have any questions, please feel free to contact Utilities Engineer Steve Kahn or myself at (805) 925-0951 extension 7211.

Staff response
Staff wants to acknowledge how helpful the City has been to Water Board staff especially in regards to helping set-up meetings and working with us on understanding the complexities of the drainage within the City of Santa Maria. Staff especially acknowledges Ellen Pritchett for her continued help in this matter.

#8 Brownstein, Hyatt, Farber, Schreck on behalf of Santa Barbara County Cattlemen's Association

Comment 8.1
This comment letter is submitted on behalf of the Santa Barbara County Cattlemen's Association (Cattlemen's Association) regarding the Central Coast Regional Water Quality Control Board's (RWQCB's) proposed amendment to the Water Quality Control Plan for the Central Coast Basin to (1) adopt a Total Maximum Daily Load (TMDL) for

fecal indicator bacteria in the Santa Maria River watershed and (2) add the Santa Maria River Watershed (including Oso Flaco Creek subwatershed) to the Domestic Animal Waste Discharge Prohibition (Amendment). This letter also comments on the substitute environmental document (SED) that the RWQCB prepared in association with the Amendment as a part of its certified regulatory program in an effort to comply with the California Environmental Quality Act (CEQA).

Staff response
Staff appreciates the comments and provides responses below.

Comment 8.2
I. Basin Plan Amendment

A. Significant Variability and Inaccuracies Evident in the Water Quality Data Demonstrate that the Data Are Not Sufficiently Accurate and Reproducible to Serve As the Basis for Establishing the New TMDL Regulations

The establishment of a TMDL is a "quasi-legislative, scientific-evidence-based administrative action[]"subject to a deferential standard of review, which asks "whether the agency's action was arbitrary, lacking in evidentiary support, or contrary to law." (San Joaquin River Exchange Contractors Water Auth. v. State Water Resources Control Board (201 0) 183 Cal.App.4th 1110, 1118.)

The Surface Water Ambient Monitoring Program (SWAMP) Field Methods Course, prepared by the Moss Landing Marine Laboratory (MLML) for the State Water Resources Control Board (SWRCB), describes water quality sampling methods that should be used to ensure accuracy and quality of data. Topic 4.6.1 Collection and Function of Field Duplicates states that:

> *Field duplicates tell us about the reproducibility of the entire sampling and analysis process. Duplicate samples are needed for the generation of the precision data quality indicator and this is essential for the delivery of data of known quality. It is very important to assure that the duplicates represent the same chunk of water, so that difference between them indicates the error in our measurement process, not the natural variability ...One sample out of 20 is collected in duplicate, and if less than 20 samples are collected during an event, submit one set of duplicates per event.*

(Surface Water Ambient Monitoring Program (SWAMP) Field Methods Course at 4.6.1 [emphasis added].)

To help justify the regulation, the RWQCB cites to data on fecal coliform concentrations from various monitoring sites in the Santa Maria watershed. (See Table 5 of the TMDL Project Report.) The back up to this data reveals a number of flaws. First, many of the measurements were taken more than 10 years ago. Second, for many of the measurements no more than two duplicate samples were taken at each of the

monitoring sites. (Appendix A of the TMDL Project Report [see e.g. Site Tag 312ALA, 312BCD, 312BCF, 312BCU, 312BRE].) The most duplicates ever taken at a site appear to be only four samples. Third, a review of the duplicate samples (reportedly taken at the same time and location) that were analyzed reveal enormous variability in the data. For example, at station 3120RB, on OrcuttSolomon Creek, on January 16, 2008 at 2:12p.m., duplicate samples give results of 240 most probable number (MPN) per 100 mL and 17,000 MPN per 100 mL of total coliform, a ***difference of over 70 times.*** *High variability between duplicates is seen at other locations as well.*

This extreme variability in the data reveals significant problems in the sampling methods used, and shows that the entire sampling and analysis process cannot be reproduced with precision for many of the monitoring stations. Because there is no reproducibility, there is also no assurance that the water quality data reported represents the actual conditions in the environment. The enormous differences in concentrations between duplicates also demonstrates the need to separate the inherent variability between samples from the "noise" (error) in the sampling and analysis process, in order to reduce the stochasticity of the data. Additionally, some of the data includes samples with no duplicates at all. Not only does this contradict the RWQCB's own protocol, in light of the enormous variability in the data demonstrated with a large number of duplicates, data without duplicates is utterly unreliable and is not a valid basis for any regulation. (See 312BRE, March 2, 2000 at 1:00 PM.)

The lack of homogeneity in samples taken at the same monitoring station at the same time also brings into question whether the water sampled was flowing and whether the samples collected were representative of the conditions in the environment. The high variability is likely indicative of stagnant water, standing water, a side pool, and/or side channel; the SWAMP Field Methods Course specifically states that sampling personnel should avoid those types of unrepresentative sampling locations Specifically, Topic 4.1.2 Stream flow patterns: where to collect a water sample states that: "water samples are collected from a location in the stream where the stream visually appears to be completely mixed ... Stay away from side pools, backwater pools, edgewater and side channels." Reports from Ronnie Davis, ranch manager at the Sisquoc Ranch who observed the sampling at the location in the La Brea watershed indicate that samples from La Brea Creek (Station 312BRE) were taken from what amounted to a mud puddle that had neither inflow nor outflow. Such sampling is contrary to RWQCB protocols and should not be the basis for any regulation of that portion of the Santa Maria River watershed. To avoid the risk of data taken at inappropriate locations becoming part of the data set, the RWQCB should set up better controls in their data collection system. For example, photos should be required to be taken simultaneously with the individual sampling to ensure that samples are taken in appropriate conditions and locations. Otherwise, the entire sampling is suspect.

In sum, the data presented in the TMDL Project Report is insufficient, dated, and highly variable. The limited number of duplicate samples and the large variability in results for samples that should be similar (because they were reportedly taken at the same time and place) raise significant questions about the integrity of all of the data. These

questions are underscored by the fact that there is evidence that the sampling protocols of the RWQCB were not followed and water samples were taken from water that was not flowing, but was in a drying, muddy pool. In light of this information, the data do not adequately demonstrate the need for TMDLs in the Santa Maria River watershed. Additional data and documentation of site conditions at the time of collection are needed before TMDLs can be properly established. Regulating based on the data provided would be arbitrary and capricious, lacking in evidentiary support, and contrary to law. (See San Joaquin River Exchange Contractors Water Auth. v. State Water Resources Control Board (201 0) 183 Cai.App.4th 1110, 1118.)

Staff response

All CCAMP field duplicate data are evaluated following the measurement quality objectives defined in the Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Program Plan (QA Plan). For pathogen indicator data, field duplicates are collected at a rate of one sample per field day or 5% of total project sample count. The CCAMP program collects one field duplicate sample on each field day and this frequency is much higher than the 5% required. Field duplicate data are evaluated by calculating the percent difference between the original sample and the duplicate sample. If that percentage is greater the 25% the sample is flagged. In addition to following the SWAMP QA Plan requirements, CCAMP staff compares the two results to the 95% confidence interval for the original sample (as defined in Standard Methods for the Examination of Water and Wastewater). If the duplicate value is outside the 95% confidence interval for the result of the original sample, the results are flagged.

The age of data does not indicate a “flaw.” Data taken in the year 2000, for example, represents the condition of the waterbody in 2000.

The nature of bacteria and the methods used to analyze them inherently have some variability (see Standard Methods, 9221 C. Estimation of Bacterial Density). Standard Methods uses a 95% confidence interval to report the data (see Table 9221.I.V). For example, a combination of 5-5-1 positive samples is reported as 300 MPN/100 mL but the lower limit could be as low as 100 MPN/100 mL while the upper limit could be as high as 1,300 MPN/100 mL. The commenter indicates a 240 MPN/100 mL reading and a 17,000/ MPN100 mL for total coliform both collected on the same day. The commenter is correct in pointing out the discrepancy in this sample as these two samples fall outside the 95% confidence interval. This data was flagged as “qualified,” but could still be used in analysis. In this case, staff did not perform analysis on total coliform for any sites except the Santa Maria Estuary (312SMA) so this particular sample for total coliform was not included for determining that Orcutt Creek was impaired.

A duplicate is not taken at every single site, every time staff samples. As indicated, staff takes duplicates for 10% of the samples, which is more than required by the SWAMP QA Plan.

CCAMP does not take samples in stagnant pools of water. In order for staff to sample, they look upstream to make sure there is flow and connectivity to where they are collecting the sample. CCAMP staff follows SWAMP protocols. With regards to Ronnie Davis, please see staff response to comment no. 9.1. CCAMP staff takes photos at every sample event. Staff did not include all the photographs in the report but the photos are available to those who would like to review them.

Staff reiterates that CCAMP staff followed appropriate protocols and the data is not suspect.

Comment 8.3

B. Fecal Coliform and Total Coliform Are Poor Indicators of Health Risk and Should Not Be Use As the Basis for Establishing TMDLs

The TMDL Project Report states that the fecal indicator bacteria used for the TMDL are fecal coliform, total coliform, and E. coli. Appendix A- Data, shows fecal coliform and total coliform were primarily used as the fecal indicator bacteria, with the occasional use of E. coli. However, the use of total coliform to indicate the presence of fecal contamination is flawed because total coliforms are a group of bacteria widespread in nature that can also be present in soil and submerged wood. The U.S. EPA recommends that total coliforms NOT be used as an indicator for fecal contamination in recreational waters. The fecal coliform group also contains a genus, Klebsiella, with species that are not necessarily of fecal origin. ***Studies conducted by the U.S. EPA show that fecal coliforms as a group were determined to be a poor indicator of the risk of digestive system illness from water contact recreation.*** *E. coli is a species of fecal coliform that is specific to fecal material from warm-blooded animals. The U.S. EPA currently recommends E. coli as a better indicator of health risk from water contact than fecal coliform or total coliform.*

Staff response

The commenter is correct that USEPA is recommending *E. coli* as the preferred indicator organism for fecal contamination (USEPA draft recommendations 2011). With regards to the three different indicator organisms used, staff only used total coliform for listing the Santa Maria River Estuary. This is because total coliform is the standard established in the Central Coast Region's Basin Plan as a water quality objective for the shellfishing beneficial use, which is a designated beneficial use of the Santa Maria River Estuary. In addition to total coliform impairment, the Estuary showed both fecal coliform and *E. coli* impairment as well. Staff reported the total coliform numbers in the appendix for each station because the lab analysis automatically reports total coliform when they analyze for fecal coliform. To reiterate, staff did not analyze total coliform in any of the other water quality stations.

Fourteen waterbodies are listed as impaired in this TMDL Project Report. Fourteen are listed as impaired for fecal coliform and six are listed as impaired for *E. coli*. While staff acknowledges that USEPA is recommending *E. coli* as a better indicator organism, staff maintains that these fourteen waterbodies were impaired as of 2008.

Future sampling may show conditions to be the same or different. Since 2005, CCAMP's sampling includes *E. coli* analysis and future sampling plans will continue to analyze *E. coli* concentrations. This is consistent with USEPA guidance.

Comment 8.4

C. The Proposed TMDL Fails to Adequately Address the Scientific Reviewer's Critiques and Adequately Assess and Consider Background Sources of Fecal Indicator Bacteria.

The Amendment includes an insufficient scientific review of the TMDL. The Scientific Reviewer, Stefan Wuertz, Ph.D., states that the TMDL is appropriate and scientifically sound, yet there clearly are numerous shortcomings in the Water Board's understanding of the percent contribution to fecal indicator bacteria concentrations from "naturalized" sources, recent sources, and wildlife sources.

As indicated in Dr. Wuertz's comments, there is substantial uncertainty as to the ability to distinguish between natural and controllable sources of fecal indicator bacteria with the proposed TMDL. There have been significant developments in microbial source tracking (MST) methods since the development of this TMDL. Dr. Wuertz suggests selected monitoring of a watershed with MST methods that target animal host-specific genetic fecal markers with fast decay rates, to help identify fecal contamination that is of recent origin, to further elucidate the MST issue.

Staff's response to Dr. Wuertz's recommendations was to acknowledge the uncertainties regarding environmental sources of fecal indicator bacteria, but to indicate that taking part in additional studies may be difficult due to lack of funding. Lack of funding is not a valid justification for imposing a regulatory scheme that relies on a flawed data base and openly acknowledges another significant natural source of the very pollutant it seeks to address. Staff further states that if numeric targets are not achieved at the end of the implementation period, staff will re-evaluate whether it is necessary to use any source tracking methods to isolate sources. This does nothing to address the technical problems associated with implementing and enforcing the proposed TMDL based on flawed data. Instead, it places the burden improperly on the regulated community to try to address an issue that the RWQCB has not established, based upon valid scientific methods, is a problem that was actually caused by the regulated community. This is especially egregious in light of the fact that it's not that the RWQCB cannot establish the source of the pollutants because the technology doesn't exist. Sound scientific methods are available, but the RWQCB concludes that it would be too expensive for to use it. In lieu of a valid data base, the RWQCB is placing the burden on the regulated community, the cattlemen - a community that does not operate on a broad profit margin and that has a well-established record of being excellent stewards of the lands and water in Santa Barbara County for a century. Without establishing that the source of the fecal indicator bacteria pollution from domesticated animals, it will be impossible to attribute causality to Best Management Practices (BMPs) (or any failure of BMPs) implemented in compliance plans. This creates significant uncertainty and potential costs for owners and operators of land with domestic animals who will be required to show compliance with TMDLs and/or take it

upon themselves to prove that the water quality objectives are not being achieved due to the influence of uncontrollable sources. Such conduct by the RWQCB is arbitrary and capricious and not supported by law.

Staff response

Please see response to comment no. 2.2, 2.6, and 6.2. Additionally, as the commenter states, the peer reviewer concluded, "*TMDL is appropriate and scientifically sound…"* Please note that staff is asking implementing parties to address controllable sources of FIB in the target waters. As such, implementing parties are not responsible for sources of FIB they have no control over, including natural sources or FIB that have become naturalized. Staff is not requiring livestock owners to invest in microbial source tracking analysis to determine if their activities are a source of FIB; microbial source tracking analysis is not necessary to conclude that livestock that have access to surface waters are a source of FIB to those surface waters. Finally, staff utilized source analysis methods acceptable to USEPA, which lead staff to conclude that livestock grazing activities are a source of FIB in the target waters. Consequently, staff's conclusions and conduct is not arbitrary and capricious.

Comment 8.5

D. TMDLs for Fecal Indicator Bacteria in this Region Should Not Be Set Until the Levels of Substantial Background Sources Are Defined and Understood

Appendix D - Annual Fecal Indicator Bacteria Contributions and Appendix C - Bacteria Source Load Calculator (BSLC) Spreadsheets of the TMDL Project Report lists estimated sources for the bacterial loads in many regions of the Santa Maria Watershed. The data supporting these estimates is not detailed or well explained. Additionally, these estimates do not include a number of key areas in the Santa Maria River watershed, including La Brea Creek.

The Clean Water Act requires that causation of a pollutant in effluent discharge be taken into account (33 U.S.C. § 1362(12)), and the California Water Code requires the same as to the water body at issue (Cal. Water Code§ 13241 (b) and (c)). If some pollutant naturally occurs in the water it is not a discharge of pollution. (33 U.S.C. § 1362(12).) There should be no legal responsibility for such naturally occurring pollutants. (See Northern Plains Res. Council v. Fidelity Exploration and Dev. Co. (9th Cir. 2003) 325 F.3d 1155,.1162; Appalachian Power Co. v. Train (4th Cir. 1976) 545 F.2d 1351, 1377.) The TMDL should consider the naturally occurring background pollutants found in the La Brea Creek and other portions of the Santa Maria River watershed, and refrain from establishing TMDLs that place an unfair burden on landowners to implement BMPs when the RWQCB has not presented evidence that the BMPs will solve the alleged pollution problem.

The percent contribution from wildlife sources in many areas in the Santa Maria Watershed, including La Brea Creek, is likely to be significant. Many regions of the Santa Maria River Watershed, including the La Brea Creek area, provide rich habitat for a broad range of wildlife to thrive, including squirrels, skunks, beavers, deer, and feral

pigs. Little information is known about the fluctuating size of many of these populations, but deer and pigs are known to multiply rapidly when food and water are abundant.

Feral pigs, which water at least twice a day and regularly wallow in creekbeds and water to cool off, can have an enormous impact on water quality. Wild pigs have few natural predators, so populations vary significantly year to year depending on the rainfall, temperature, food supply, and other environmental factors. Eyewitness accounts from land managers report sightings of individual herds ranging from 40 to 100 pigs active within some portions of the watershed. Although grazing operators provide water troughs away from riparian areas, those sources may not necessarily draw pig activity out of the riparian areas.

There are numerous beaver dams on the Sisquoc River, and particularly on La Brea Creek, which is adjacent to the Sisquoc River. Appendix C of the TMDL Project Report does not account for input of fecal bacteria from beavers. Beavers would likely be a major source of fecal bacteria given that they live in colonies (groups) in the aquatic environment.

In sum, the RWQCB's analysis is flawed because it does not take into account significant background sources of fecal indicator bacteria. This results in a standard that is not statistically defensible, which creates significant uncertainty and unfair risk for those identified as responsible parties. It also subjects the regulatory program to successful legal challenge.

Staff response

The BLSC analysis does include La Brea Creek, but it includes La Brea Creek as part of the larger Sisquoc watershed. The Water Board does not hold landowners responsible for naturally occurring FIB, as stated in the Project Report.

Staff took into account natural animals such as those described above in Table 13 – Inventory of fecal coliform producers in the Santa Maria Watershed. Staff estimated these populations based on various credible sources (e.g. Department of Fish and Game, USDA Census, etc.). Just as an exercise in how much of a difference there is between livestock and wildlife contribution; staff doubled the entire wildlife population as presented in the Project Report and cut the cattle population in half. Even with doubling the wildlife population and halving the cattle population, fecal coliform produced per day changes wildlife contribution to 9% from 3% and livestock to 70% from 85% (numbers were rounded to the nearest hundredth).

With regards to wild pigs, staff agrees with the reviewer that wild pigs may be large in number and may cause disruption to the riparian area. The issue of wild pigs is an environmental issue and staff acknowledges that the pigs can be problematic on many levels, including adverse impacts to sensitive species (Jolley, 2010). Staff recommends contacting their local Department of Fish and Game representative, Jim Solis (jsolis@dfg.ca.gov), and discussing their options regarding the wild pig

population. Please also see http://www.dfg.ca.gov/wildlife/hunting/pig/ for more information on wild pigs.

See also response to comment 1.4. and 2.6.

Comment 8.6

E. The Requirements for Compliance with the Domestic Animal Waste Discharge Prohibition Are Not Clearly Defined and Create Unreasonable Risk

The requirements to comply with the Domestic Animal Waste Discharge Prohibition (Prohibition) have not been clearly defined. It is not clear whether the submission of water quality data from the owner/operator, gathered by a third party, will be sufficient to demonstrate compliance or whether another method of data collection will be required. The frequency and content of the monitoring and reporting to the Water Board also has not been established. Further, it is unclear whether the terms of the "plan for compliance" will be dictated by the Water Board, the owner/operator, or a third party. This lack of specificity makes it unclear what the cost will be to the owners and operators of land with domestic animals and whether the prohibition will be effective in improving water quality.

Given the disparate nature of the area's land uses and the range of potential sources of fecal coliform, the numerical standard of the basin plan cannot be met in a statistically defensible manner. Inasmuch as the RWQCB admits that it lacks the funds necessary to perform scientifically adequate and accurate studies, the RWQCB's adoption of the Amendment will be arbitrary and capricious because it will set an unrealistic TMDL that is supported by questionable data and does not take into account background levels of naturally occurring fecal indicator bacteria.

The RWQCB is placing the burden on landowners to spend valuable time and money to adopt BMPs that have no demonstrated beneficial impact on water quality (and have not been shown to be necessary because the data fails to link the landowner's operations in the watershed to the problem) or to pay for costly MST testing to demonstrate that the fecal indicator bacteria's source is non-domesticated animals. Property owners and public entities also will be subject to unreasonable regulatory liability for enforcement by the RWQCB and under provisions of the CWA, exposing them to potential fines, attorneys' fees, and other costs, and opening the door for citizen lawsuits. Stated differently, with the proposed Amendment, the TMDL regulatory process will make landowners in the Santa Maria River watershed the target of unreasonable and unfounded enforcement actions and citizen suits for non-compliance with standards that cannot be reasonably met. This becomes a "guilty until proven innocent" standard that isn't legally defensible, but places the burden on the landowners to dispel. Regulating in this manner is arbitrary and capricious and contrary to law, and the RWQCB should abandon it's effort to saddle these landowners with these onerous and arbitrary regulations.

Staff response

Staff directs the commenter to section 6.2.2, Domestic Animal/Livestock Discharges in the Project Report. Some livestock owners are currently in compliance with the prohibition. For those who are not in compliance with the prohibition, staff will identify those individuals. After identification, complying with the prohibition can be done in three ways, as stated in this section; 1, demonstrating no discharge, 2, submitting a plan for compliance with the prohibition, or 3, submitting a report of waste discharge. Staff concluded that the commenter is referring to number 2 in terms of items being unclear.

As stated in this section, "the Executive Officer will require owners/operators of lands containing domestic animals to submit…2) a Nonpoint Source Pollution Control Implementation Plan for compliance with the Domestic Animal Waste Discharge Prohibition." This states that the owners/operators will submit the plan and the plan will not be dictated by the Water Board. This plan for compliance should be focused on management measures and demonstrating progress towards achieving water quality objectives. This plan should include conventional water quality testing. With regards to the commenter's statement, "*It is not clear whether the submission of water quality data from the owner/operator, gathered by a third party, will be sufficient to demonstrate compliance or whether another method of data collection will be required," s*taff is concluding that the commenter is referring to other source tracking methods. Staff does not anticipate requiring owners/operators to perform source tracking, however, if owners/operations choose to perform this sampling, they may. Additionally, an owner/operator may choose to have a third party gather their data if they prefer.

With regards to background levels of FIB, please see comments number 2.6 and 8.5.

The Water Board is requiring that owners/operators employ effective management practices. Staff has had conversations with landowners in this watershed and concluded that many landowners are already implementing management practices. In this case, the landowners, if contacted, will inform the Water Board of what they are already doing and depending on the situation may be able to show that they are already in compliance with the TMDL. If a landowner/operator is employing management measures but the water quality adjacent to their property still has elevated levels of FIB, staff will investigate to determine if this is due to an upstream property or due to wildlife.

Comment 8.7

F. Cost Estimates Associated with Domestic Animal Discharge Prohibition Are Flawed

Section 6.6.2 of the Project Report provides an analysis of estimated costs associated with the Prohibition. This analysis includes numerous flaws that result in underestimating the actual cost of planning, implementation, monitoring, and reporting.

Planning or Program Development Actions. Staff estimates approximately eight hours per site for planning and developing implementation measures (Project Report, p. 75). Many owners of rural residential properties do not have the education or experience to conduct these planning activities; significantly more than eight hours will be required to do planning for the average landowner.

Implementation. The use of national statistics underestimates the actual cost of implementation because such costs are well below the costs of materials and labor incurred in California. Hilly and densely-brushed topographies in California further increase costs over and above national averages. The analysis also relies on data from 2005 and 2008 but includes no consideration of increasing costs in the intervening years. The CPI may not have increased significantly, but costs of labor and materials have. The estimated implementation costs also do not account for permitting costs which, particularly for practices impacting riparian areas, would be very high. Finally, the estimated costs do not account for the fact that this region is naturally susceptible to fire disturbance. After grazing lands burn, it's very difficult to access large areas of land and to install and maintain fencing because rains result in mud and debris flows when the hilly land is no longer stabilized by vegetation. These mud and debris flows regularly wash out fencing, access roads, and other infrastructure.

Inspections/Monitoring. As noted above, RWQCB staff discusses monitoring throughout the Project Report without identifying which parties will perform the monitoring. If staff expects the regulated landowners to do the monitoring or to fund it, this activity should be related in the Project Report and those costs should be incorporated into this section. Equally important, the frequency and content of monitoring must be defined in order for costs to be accurately determined.

Staff response

See Response to Comment No. 7.12. Section 21159(c) of the Public Resources Code requires that the environmental analysis take into account a reasonable range of environmental, economic, and technical factors; population and geographic areas; and specific sites. Staff used the information available in order to estimate costs of implementing the TMDL. Staff provided a range of the costs. The environmental documentation includes a range of costs for the reasonably foreseeable methods of compliance. Staff provided an estimate of costs based on the information available. Naturally, there is a level of uncertainty in any estimate, versus actual costs. This is in part, due to the uncertainty surrounding the number of facilities, ranches, farms, etc. that will require implementation. Nevertheless, the cost estimate is a reasonable estimate based on information available.

The commenter seems to imply that ALL people engaged in livestock management activities will inevitably be subject to implementing the most costly management measures. It is important to note that staff's existing efforts to date, with respect to regulation of livestock managers, have aimed not at imposing requirements on all people engage in livestock management, but to identify individual operations where a threat to water quality exists, and address those problems individually. It is possible

that the scope of water quality problems associated with lands containing domestic animals is confined to a few select problem areas. In other words, the number of ranching operations requiring changes in management practices may be few. The commenter should bear in mind that livestock grazing activities in the project watershed are almost entirely limited to the upper portions of the watershed in the Alamo Creek, La Brea Creek, and upper Cuyama River areas, and fecal coliform concentration in these areas is not as high as other areas where grazing activities do not occur. Additionally, there are no impairments for *E. coli* in the watersheds of Alamo, La Brea, and upper Cuyama, even though staff has analyzed *E. coli* data from these areas. Staff is quite aware of these facts and will prioritize implementation efforts accordingly during the implementation phase of the TMDL. For implementing parties engaged in grazing activities that do require changes in management practices, staff supports cost effectiveness while still providing for water quality results. The TMDL does not specify the manner of compliance; ranchers may comply in any lawful manner.

The proposed TMDL recognizes that it is not possible to immediately achieve applicable water quality objectives for FIB. Consequently, it is important to note that the TMDL has a proposed 15 year time frame, and measuring TMDL achievement and compliance will - in part - be measured by observing progression or continuous improvements to water quality over the long term. Considering the hierarchy of approvals a TMDL and Basin Plan Amendment are required to go through, the earliest possible date that active regulatory oversight efforts and implementation tracking could conceivably begin to be initiated would be late-2012. Bearing in mind these timelines, note that while the primary measure of success for this TMDL is attainment or <u>continuous progress</u> toward attainment of the TMDL water quality numeric targets and load allocations over the long term, it is important to emphasize that in evaluating successful implementation of this TMDL, attainment of trackable implementation actions will also be heavily relied upon (tracking the scope and extent of implementation of management measures, in addition to water quality monitoring as warranted).

Also, it is important to note that the Water Board cannot mandate or designate the specific types of on-site actions necessary to reduce indicator bacteria loading, or to meet allocations by the various responsible parties. Specific actions or management measure that are described or identified in the project report can only be suggestions or examples of actions that are known to be effective at reducing loading. Therefore, implementing parties can choose the most cost-effective measures.

As stated above, staff supports monitoring efforts that monitor management practices aimed at water quality success, particularly during the initial years of TMDL implementation. Staff has intentionally left water quality monitoring requirements open in an effort to tailor water quality monitoring efforts when and where it makes sense.

With the above information in mind, staff maintains that estimates of costs, and concerns about the current economic climate due not preclude the need to adopt a

TMDL based on current water quality standards in order to begin to initiate (or assess) control measures for known or probable controllable sources of fecal coliform loads. The Water Board is required by the Federal Clean Water Act to adopt TMDLs for water bodies listed pursuant to Section 303(d) of the Clean Water Act and impaired water bodies, and State Nonpoint Source Pollution Policy requires the Water Board to regulate nonpoint sources of pollution. Please note that staff considers the adoption of the proposed Domestic Animal Discharge Prohibition to be the least burdensome nonpoint regulatory mechanism for Responsible Parties, from an economic and regulatory standpoint, as a Prohibition does not include or trigger any requirement to pay annual permit fees, as could be the case with waste discharge requirements, or waivers of WDRs.

Comment 8.8

G. TMDLs Should Not Be Set for Any Portions of the Santa Maria River Watershed that Are Not on the 303(d) List As Impaired, Such As La Brea Creek and Oso Flaco Lake

No TMDL should be set in the Santa Maria River Watershed for any area not already on the 303(d) list as an impaired waterway. TMDLs are a tool to manage pollutants in waters already identified as impaired. (See 40 CFR §130.7(d).) "When the Clean Water Act's permit program ... fails to clean up a river or river segment, states are required to identify such waters and list them in order of priority. Based on that listing, known as the 'section 303(d) list' ..., states are to calculate levels of permissible pollution in TMDL's (i.e., total maximum daily loads)." (San Joaquin River Exchange Contractors Water Authority v. State Water Resources Control Bd. (2010) 183 Cai.App.4th 1110, 1115 [citations omitted].)

La Brea Creek and Oso Flaco Lake are not on the 2008-2010 303(d) list as impaired for fecal coliform and Main St. Canal, Nipomo Creek, Orcutt Creek, and Oso Flaco Lake are not on the 2008-2010 303(d) list for E. coli. Nevertheless, the proposed regulations set TMDLs in these waterbodies.

Staff response

States can establish TMDLs where pollutants are preventing or expected to prevent attainment of water quality standards (CFR 130.7). Staff has determined that some waterbodies not currently on the 2008-2010 303(d) list are not attaining water quality standards for indicator bacteria. Staff expects these waterbodies will be incorporated on a future 303(d) list.

All the waterbodies in this Project Report are required to meet water quality standards, regardless of whether the waterbody was identified as impaired on the 2008-2010 303(d) list or not. TMDLs merely create a strategy to attain those standards that were already established but which are not yet attained in a specific water body. TMDLs thus serve as a means to an end. That end is the attainment and maintenance of existing water quality standards.

Comment 8.9

H. A Collaborative Approach Is Appropriate

For all of the reasons discussed above, implementation of TMDLs and the associated monitoring requirements is not appropriate at this time. The Project Report does not provide a defensible scientific basis for allocating responsibility for the TMDLs to the various identified "Responsible Parties," particularly in rural areas where background contributions from non-controllable sources are known to be a significant source of fecal indicator bacteria in the watershed. In lieu of the program proposed, the Santa Barbara County Cattlemen's Association proposes a collaborative approach, including education and assistance with implementation of management practices, along with monitoring of implementation sites to determine if these measures improve water quality and to accurately determine the sources of impairments.

Until the sources of the impairment are clearly defined, establishing TMDLs and assigning responsibility to landowners and others is a prophylactic approach that provides no certainty that water quality improvements will be achieved while placing significant, unjustified financial burdens on the regulated communities.

Staff response

Please see comments no. 2.6 and 6.2 regarding natural sources in this watershed. Based on the commenter statement, staff is concluding that the Cattlemen's Association would like to implement a very similar program to the implementation plan in the TMDL. Indeed, staff fully support the actions described by the commenter, and need to play a role in the information exchange as implementation actions commence.

TMDLs in areas that have domestic animals are not new to the Central Coast Region, California or nationwide. Defecation from livestock, if not properly managed, can contribute to elevated FIB levels in creeks. If livestock are properly managed, water quality in grazing areas can meet water quality objectives. Cattlemen in general have been supportive of the July 1995 *California Rangeland Water Quality Management Plan*, which was adopted by the State Water Resources Control Board nearly 16 years ago. The implementation of this TMDL is very similar to what is outlined in that plan. These concepts are not new and Cattlemen have endorsed them. Staff has been engaging the public with this TMDL since 2003 (see section 6.8 in the Project Report). There is no reason to delay adoption of this TMDL. Staff anticipates working collaboratively with the owners/operators with the ultimate goal of achieving clean water.

Comment 8.10

Substitute Environmental Document

A. Insufficient Analysis of Economic Impacts of Domestic Animal Waste Discharge Prohibition

Although the environmental review document concludes that there would be no potentially significant impacts to agricultural resources, the document fails to adequately consider and assess the enormous economic burden associated with complying with

this TMDL implementation plan, which could pose a threat to the economic viability of ranching operations and to long-term viability of agricultural operations. Because these significant costs have a strong likelihood of changing every three years, they have the potential to create a growing economic strain on all operators, but particularly the smaller operations, resulting in even greater financial burdens and uncertainty for agricultural operations in the watershed.

As discussed above, the estimated costs of implementing and monitoring associated with the Prohibition are incomplete and significantly underestimated. The Prohibition has the potential to result in a significant loss of ranching operations due to the cost of these additional regulatory requirements. As a result, rangeland no longer would be actively managed, which in turn would result in further potentially significant environmental effects. This includes a loss or reduction of local food sources, biological impacts resulting from an increase in non-native and invasive plants on unmanaged lands, and increased wildfire hazards to rural and urban lands due to increasing fuel loads. While land use designations and zoning are not proposed to change as part of this project, rangeland that becomes economically infeasible to operate could be further subdivided under existing zoning and land use designations, resulting in increased development and potentially significant project specific and cumulative impacts on public services, traffic, and population and housing. These and other potential impacts of the loss of rangeland as a result of the proposal must be analyzed.

The TMDL Project Report states that the TMDL for fecal indicator bacteria is one of four TMDLs being developed by staff for the Santa Maria River Watershed (p. 6). However, the SED fails to acknowledge or analyze the cumulative economic impact these TMDL regulations would have upon the regulated community. If additional TMDL's are proposed to be included in the foreseeable future, the project cannot be analyzed for environmental impacts in a piecemeal approach. To do so results in an underestimation of the entire regulatory scheme being proposed and implemented by the RWQCB. It is improper, and contrary to California environmental law, to analyze proposed project impacts in a piecemeal fashion. Doing so avoids comprehensive environmental review of the impacts of the proposed project as a whole.

Staff response

Staff rejects the commenter's suggestion that the cost to implement the TMDL will result in conversion from agricultural land use, significantly affect biological resources, public services, planning, housing, and population growth. The commenter's suggestion is based on a misunderstanding of the requirements and associated costs. Please see comments and responses regarding cost, e.g. comment and response 8.7. Please see comments and responses regarding CEQA, e.g. comment and response 7.13B.

Furthermore, CEQA regulations specify that economic and social effects of a project shall not be treated as significant effects on the environment (14 Cal. Code Regs, § 15131, subd. (a).). As mentioned in response to comment no. 8.9, the 1995 California

Rangeland Water Quality Management Plan has been in effect for over 16 years and the Water Board is requiring little more than that plan currently prescribes.

Staff is unsure what the commenter means by these costs changing every three years.

It is important to note that even if costs are high, the dischargers have an obligation to comply with the Water Code by controlling discharges that violate water quality standards. There is no right to discharge waste to waters of the state (Cal. Wat. Code § 13263, subd. (g)). It is within the ability of ranchers to control the costs by choosing the manner of compliance that is effective in terms of cost and protection of water quality.

The environmental documentation analyzed the reasonably foreseeable methods of compliance and significant adverse environmental effects associated with the reasonably foreseeable methods of compliance and did not identify any significant adverse environmental effects associated with the domestic animal provisions of the TMDL. The reasonably foreseeable methods of compliance include fencing, but based on the fact that other management measures will likely be easier to install and less costly, it appears unlikely that significant fencing would be added that would result in significant adverse environmental impacts.

The Santa Maria watershed TMDL for fecal indicator bacteria is a TMDL in itself, and not part of a larger TMDL. Staff is in the early stages of developing other TMDLs for the Santa Maria watershed for nutrients, pesticides, and salts. Staff is unsure when those TMDLs will be finalized and ready for Water Board consideration, but does not expect that implementation of those TMDLs, along with this TMDL, will result cumulative impacts. This is because the implementation measures associated with these future TMDLs (nutrients, salts and pesticides) will be implemented with management practices that are different than those required for reduction of fecal indicator bacteria. These management practices are not similar and will not act synergistically and therefore should not result in cumulative impacts. Additionally, as noted above, there are no significant impacts associated with this TMDL. The impact to water quality due to loading from fecal sources in the Santa Maria watershed is significant, and prolonging the commencement of implementation actions is not consistent with Water Board responsibilities.

Comment 8.11
B. Insufficient Analysis of Environmental Effects

The SED fails to adequately identify and analyze numerous potentially significant environmental effects including but not limited to the following:

• *Biological resources- Impacts to Special-Status Species. The analysis states that activities related to the construction of fencing and berms could result in the removal of soil and vegetation that could impact protected species. The analysis fails to quantify*

the potential impacts but nonetheless concludes that impacts would be less than significant. There is no adequate evidence to support such a conclusion because the analysis does not include disclosure of the factual basis for the finding or the order of magnitude of soil and vegetation removal.

The SED recommends consultation with resource agencies such as the California Department of Fish and Game or U.S. Army Corps of Engineers and other measures to mitigate identified impacts. However, the construction of berms and fencing on agricultural land outside of riparian areas generally does not require permits or review by resource agencies. As such, there is no way to regulate the methods used to construct such structures or to ensure that mitigation measures such as replacement of soil and vegetation are implemented. This could result in soil erosion, loss of habitat, direct death and injury to sensitive species, and other significant environmental impacts that have not been, but must be, evaluated and disclosed.

Staff response

Because the Water Board cannot dictate the manner of compliance, staff found it difficult to quantify exactly how many management practices might be put into place, their location, what type, etc. Therefore, it would be highly speculative to quantify the magnitude of soil and/or vegetation removal. Please see page 12 in the Biological Resources section of the CEQA documentation for a more thorough answer to this question.

Minimizing cattle's access to the creek during certain times of the year would likely reduce soil erosion in the riparian corridor; not increase soil erosion. Staff does not follow the assertion that properly managing cattle would lead to loss of habitat or direct death or injury to certain species.

Comment 8.12

Biological resources- Impacts on Wildlife Movement.

The environmental analysis identifies the construction of exclusion fencing along waterways as a potential implementation measure. However, the analysis fails to adequately address potential impacts of fencing on wildlife movement and on livestock safety. Constructing fencing in a manner that excludes livestock from waterways is tricky at best. Cattle will tear up fencing to reach water and the vegetation growing along creeks, leaving damaged fencing as a hazard to other livestock or becoming entangled in the fencing and incurring injury. Maintaining this type of fencing in rural lands is a constant challenge and a significant expense. The fencing requires constant monitoring and repair because hungry, thirsty cattle attempt to go right through fences. Without any substantiating evidence, the document concludes that "reasonably foreseeable compliance would not be of a scale large, contiguous, or numerous enough to block migration or use of wildlife nursery sites." (SED, p. 15.) This conclusory finding is not an adequate environmental analysis as required by California law.

Outside riparian areas, fences on agricultural land are exempt from permit requirements. As such, there is no requirement or assurance that a land owner build a

"wildlife friendly" fence. Further, there is no evidence to support the conclusion that fences will not be large, contiguous or numerous enough to block wildlife movement. In order to exclude livestock from a waterway, it is reasonably foreseeable that a ranch owner would need to fence along the entire length of the waterway on his/her property, and adjacent owners would need to do the same, which would result in several miles of fencing.

There is substantial evidence that non-wildlife friendly fencing can impact wildlife movement leading to fragmentation and isolation of wildlife populations and habitat and/or be hazardous to wildlife, including protected species. Fencing can impede wildlife access to critical resources (e.g., water, forage, fawning grounds, and cover) or restrict escape routes essential to the well being of individuals and populations. (See Ventura County Planning Division Roads and Biodiversity Project: Guidelines for Safe Wildlife Passages.) Fences also can pose a risk to wildlife if wildlife can become ensnared in the wires or are unable to cross under or over the fence. Deer can have difficulty crossing some fences, and many birds and bats can collide and become ensnared in wire fencing. This is especially true in areas with high bird traffic, such as stream corridors. (See Wildlife Friendly Fences: Tools for Healthy Riparian Areas,5 p. 3).

The SED must identify existing wildlife corridors and potential locations and extent of fencing and then analyze the potential impacts of such fencing on wildlife movement to determine whether a significant impact could result.

Staff response

As staff stated in the SED, staff does not expect that fencing will be implemented on a large scale with the objective of achieving TMDL allocations. Staff expects implementing parties will use less costly methods of protecting water quality. Staff gave a wide range of potential grazing animal management practices that ranchers could use (please see Table 23 in the Project Report). If the landowners/operators choose to install fencing, staff recommends they choose to use wildlife friendly fences.

Comment 8.13

Cultural resources. The SED recognizes that ground disturbance resulting from reasonably foreseeable implementation could disturb cultural resources. However, the analysis finds "no impact" for this issue area. The document states that this conclusion is based on the fact that a fence post hole is a small-scale operation and the fence could be re-sited if cultural resources are found. (SED, p. 15.). However, as stated above, construction of a fence on agricultural land generally does not require a permit. There would be no way to monitor fencing locations or to enforce relocation of the massive fencing that is likely to result from this Prohibition. The analysis also fails to evaluate the potential impacts of other, more extensive ground disturbance such as for the construction of berms on agricultural land, creation of bio-retention areas or swales, and improvements to municipal stormwater systems. Known Chumash settlement patterns demonstrate that early Native Americans tended to settle, congregate, or camp adjacent to creeks, and to use water bodies for food gathering. It is reasonable to

assume that ground disturbance near waterways, both inside and outside of riparian areas, could disturb significant cultural resources. As such, the project could result in the disturbance of cultural resources and there is the potential for a significant impact that must be analyzed and mitigated.

Staff response
Please review the SED and comments/response to comments pertaining to reasonable methods of compliance. Staff does not expect that large-scale fencing projects or creation of berms on agricultural lands, or other major construction activities, will be implemented to comply with the TMDL.

With regards to cultural resources, if an implementing party did choose to install a fence, staff does not expect a substantial adverse change. Staff based this conclusion on the small-scale operation of digging a new fence post hole, and because the fence post could be re-sited if cultural resources are found. If during ground-disturbing activities cultural resources or unique geologic features are identified, all work within 50 feet could be halted and a qualified archaeologist/geologist contacted to evaluate the finds and make recommendations. In other words, a significant impact is quite avoidable. If the cultural resources or geologic features are not significant as determined by a qualified archaeologist/geologist, no further protection is necessary.

Comment 8.14
Cumulative impacts. The Project Report states that the FIB TMDL is one of four TMDLs being developed by staff for the Santa Maria River Watershed (p. 6). The SED must identify and analyze the potential cumulative environmental impacts implementation of all of these TMDLs. In addition to impacts resulting from the economic effects on ranch operations, this could include, among others, additional significant impacts to biological and cultural resources.

Staff response
Please see comment and response 8.10.

The Santa Maria watershed TMDL for fecal indicator bacteria is a TMDL in itself, and not part of a larger TMDL. Staff is in the early stages of developing other TMDLs for the Santa Maria watershed. Staff is unsure when those TMDLs will be finalized and ready for Water Board consideration, but does not expect that those TMDLs will result cumulative impacts. This is because the implementation measures associated with these future TMDLs (nutrients, salts and pesticides) will be implemented with management practices that are different than those required for reduction of fecal indicator bacteria. These management practices are not similar and will not act synergistically and therefore should not result in cumulative impacts. The impact to water quality due to loading from fecal sources in the Santa Maria watershed is significant, and prolonging the commencement of implementation actions is not consistent with Water Board responsibilities.

Comment 8.15
C. Significant Impacts Must Be Analyzed and the SED Must Be Recirculated

As described above, significant impacts could result from implementation of the TMDLs and Domestic Animal Waste Discharge Prohibition. These must be analyzed and the SED must be recirculated to allow adequate public review and input regarding these significant and onerous proposed regulations.

Thank you for your consideration of these comments.

Staff response
Please see comments and responses above regarding CEQA.

Staff does not agree that significant adverse environmental impacts could result from implementation of the TMDLs and Domestic Animal Waste Discharge Prohibition. On the contrary, staff expects that environmental benefits will be realized. As such, staff does not find that the SED should be recirculated.

#9 Ron Davis, cattle foreman, Rancho Sisquoc/Flood Ranch

Comment 9.1
I have been the cattle foreman for the approximately 35,000 acre Rancho Sisquoc/ Flood Ranch Company (the Ranch) for approximately 10 years. I currently manage around 300 head of cattle in a cow/calf operation in parts of the La Brea Creek Watershed. We granted Water Board Staff member Mary Hamilton, formerly known as Mary Adams, access to the Ranch to conduct monthly water quality sampling at site 312BRE on La Brea Creek during the 2000-2001 and 2007-2008 CCAMP sampling rotations. Accessing site 312BRE requires access to the Ranch (private property); the site is not accessible via public road or public right of way. For all intents and purposes, Ms. Hamilton appeared to conduct water quality sampling according to proper protocol and in a professional matter, However, I do not believe that the sampling location is representative of the entire 6.6 mile stretch of La Brea Creek proposed for inclusion in this TMDL Project and request revision of the TMDL to reflect this.

First, the site was primarily chosen as the monitoring location due to its ease of accessibility and because of the greatest likelihood of having water year-round for water quality sampling. However, this location is not representative of La Brea Creek, dries up each year, no longer flowing to the Sisquoc River. Some years, the location at 312BRE maintains low flows and isolated pools when reaches both upstream and downstream are dry. This is evident in the data collected by CCAMP staff, with no samples collected in July of 2000 or between June 2007 and December 2007 because the site was dry. Furthermore, all five of the fecal coli form results that exceed the criteria were taken in the months of April, May or June. I believe that samples collected at this location in late spring and summer months reflect a small localized condition.

In addition, Site 312BRE is located in a relatively narrow portion of La Brea Creek Canyon, adjacent to a gate and fencing which existed prior to sustaining damage from the mudflows from the La Brea Fire. This gate and fencing were in part used for periodically concentrating and holding cattle after rounding them up from the property and prior to bringing them into Ranch headquarters for shipping off-site, performing veterinary services, etc.

Staff response

Mary Hamilton confirmed that samples may reflect a localized condition based on the following: 1) samples were not collected in summer months due to lack of flow in La Brea Creek at monitoring site 312BRE, 2) staff observed La Brea Creek to be dry between the sample site (312BRE) and the downstream confluence with the Sisquoc River on multiple occasions, 3) the volume of water flowing in La Brea Creek is very low unless there was recent and significant rain in the watershed.

However, CCAMP data is representative of the sample location at which it was collected. CCAMP staff does not collect samples or field measurements if a site does not have flowing water and connectivity with the upstream watershed within sight. Furthermore, CCAMP staff will not collect data if flowing segments are completely separated by areas of dry substrate.

There are two considerations staff use to determine if specific creek segments are not meeting water quality objectives when other segments are meeting objectives; 1) there is a clear change in the hydromorphology (or structure and morphology of a creek) such as a lagoon can be delineated as a separate segment from the upstream area or 2) there is upstream data showing that water quality objectives are being met at a specific location. While staff does not disagree that the data collected at 312BRE may not be representative of the entire 6.6 miles of La Brea Creek, staff cannot arbitrarily delineate impaired segments at this time in the absence of upstream data showing water quality objectives are being met.

Comment 9.2

Finally, all sample data referenced for the Santa Maria River Watershed TMDL for Fecal Indicator Bacteria were collected before the La Brea Fire of 2009. Rainfall in the post-fire has led to high rates of topsoil erosion due to the destruction of vegetation from the fire. Since the fire, mudflows during rain events have substantially changed the current conditions at the sampling site. However, samples taken in 2000-2001 and 2007-2008 and included in the data for the TDML, were taken when the sampling location was primarily composed of a rocky cobble substrate, with pooled, stagnant water and dense aquatic vegetation. Therefore, this Site did Not continually provide water quality samples containing a homogenous concentration of analytes, including fecal coliform.

As such, it is my opinion that the data from Site 312BRE used in this TMDL Project is not necessarily indicative of the water quality on the entire La Brea Creek and therefore not necessarily an accurate representation of the conditions in the environment.

Staff response
Again, staff does not disagree that the data collected at 312BRE may not be representative of the entire 6.6 miles of La Brea Creek. However, staff cannot arbitrarily delineate impaired segments at this time in the absence of upstream data showing water quality objectives are being met or that the hydromorphology is different.

#10 Mark Adam – La Brea Ranch

Comment 10.1
My name is Mark Adam. I own La Brea Ranch and my family and we manage cattle on approximately 20,000 acres, an area that constitutes much of the La Brea watershed. This comment letter is meant to address the Central Coast Regional Water Quality Control Board's (Board) proposed amendment to the Water Quality Control Plan for the Central Coast Basin to adopt a Total Maximum Daily Load (TMDL) for fecal bacteria in the Santa Maria Watershed and to add the Santa Maria Watershed to the Domestic Animal Waste Discharge Prohibition. Below are some issues that I think the Board should consider before making a decision on the proposed amendment.

I. The data was collected in an unreliable manner.

It's my understanding that a TMDL is being set for the entire La Brea Creek watershed based on one sampling point near the end of the watershed. This seems wrong for a number of reasons. First, it's my understanding that the single sampling site was in an area that can dry up during the summer. The creek may not have been running when a number of those samples were taken. If the samples were taken from stagnant water or water in a drying mud hole, the sample would not provide reliable data about the water quality in the watershed. Concentrations of pollutants in a drying mud hole are likely to be far higher than in the normal water stream. To address this issue, the RWQCB should take pictures to document the condition of the sampling site at the time of sampling to prove that the site could provide a reliable sample.

Staff response
Mary Hamilton confirmed that samples may reflect a localized condition based on the following: 1) samples were not collected in summer months due to lack of flow in La Brea Creek at monitoring site 312BRE, 2) staff observed La Brea Creek to be dry between the sample site (312BRE) and the downstream confluence with the Sisquoc River on multiple occasions, 3) the volume of water flowing in La Brea Creek is very low unless there was recent and significant rain in the watershed.

However, CCAMP data is representative of the sample location at which it was collected. CCAMP staff does not collect samples or field measurements if a site does not have flowing water and connectivity with the upstream watershed within sight. Furthermore, CCAMP staff will not collect data if flowing segments are completely separated by areas of dry substrate. In addition, CCAMP staff does take photographs

from the monitoring point facing upstream at each monitoring event. These photos show upstream flow to the monitoring location at 312BRE.

Comment 10.2

In addition, I am aware that wild pigs live in the area where the samples were taken. Wild pigs regularly visit water sources to drink and cool down. The feral pigs would increase the bacterial count in the water in the sampling site. Therefore, the bacteria count found in the sample may be due to wildlife, not cattle. Without documentation of the sampling site, it is impossible to know. The Board should not rely on the data collected from this single sampling site because not only is the location dry for portions of the year, it's not clear that any supposed bacterial pollution in that water would be the result of cattle in the creek instead of wild animals such as feral pigs.

Staff response

Wildlife is known to be a potential source, as are cattle. There are several watersheds where there are wild pig populations and fecal coliform is not exceeding water quality objectives. The Sisquoc River, Huasna River, and Scott Creek (in Davenport, CA) are three examples of watersheds that are not exceeding water quality objectives for fecal coliform but have cattle grazing, agriculture, and large populations of wild pig, deer and other wildlife present. Please also see response to comment no. 8.5 regarding wild pigs as well as 2.6 with regards to natural source. Implementing parties are not responsible for sources from wildlife.

Comment 10.3

II. It is improper to decide to list an entire watershed based on this one sampling site.

With over a 40,000-acre drainage area to sample from, the sample that this new regulation depends upon was taken from a single sampling site. This site is on the edge of the drainage area and is perhaps the worst spot from which to take a sample due to the characteristics of the spot, as described above. It is improper for the Board to base its decision on this one unreliable sample site. This is especially true because the creek does not run through all of the year. So the water quality at the bottom of the reach in no way reflects the status of the water in the upper reaches. Additionally, there are portions of the creek that run all year round. The Board should not regulate this entire portion of the Santa Maria River watershed without accurate data about the baseline water quality.

Staff response

Again, staff does not disagree that the data collected at 312BRE may not be representative of the entire 6.6 miles of La Brea Creek. However, staff cannot arbitrarily delineate a length of the impaired segments at this time in the absence of upstream data showing water quality objectives are being met or that the hydromorphology is different. Furthermore, CCAMP data is representative of the sample location at which it was collected (312BRE) and staff does not collect data if the flow at a monitoring site is stagnant or not connected to the upstream area.

Comment 10.4
III. The proposed regulation does not consider the fact that ranchers use practices to keep cattle out of creeks.

Ranchers along the La Brea use a variety of methods to ensure that cattle do not concentrate at in creeks and water bodies. Along my stretch of the La Brea, water is pumped 1,000 vertical feet above the Creek bottom and into holding tanks connected to troughs. This enables the cattle to water far above the riparian area in the summer when water concentrations are low in the streambeds and risk of pollution is greater.

Moreover, stretches of the La Brea have water flow year-round. There are many points along the La Brea for cattle to water, avoiding the problems associated with cattle concentrating.

The proposed amendment fails to take into consideration that cattle owners along the La Brea use a variety of methods to guard against the pollution risks associated with cattle concentrating at one watering hole. For this reason, the proposed amendment is based on inadequate information.

Staff response
Staff commends your management practices to provide water above the riparian area.

Staff also requests that you submit any data or documentation you have showing the extent of the "*stretches of the La Brea [with] water flow year-round*." Documentation verifying that the monitoring site at 312BRE is within such a stretch may be used by staff to delineate a smaller portion of the Creek. In the absence of data verifying a difference in hydromorphology (or structure and morphology of a creek), staff cannot arbitrarily delineate a length of the impaired segments.

Comment 10.5
IV. The proposed amendment should not be approved.

I think it is clear from the previous sections that the proposed amendment is based on faulty and inadequate information. As such, I urge the Board to decline to approve the amendment.

Thank-you for considering my comments.

Staff response
CCAMP data is not faulty. CCAMP staff collects samples following the State's Surface Water Ambient Monitoring Program protocols for collection of water samples. In addition Quality Assurance data and procedures ensure the data is of known and documented quality. Furthermore, CCAMP staff use best professional judgment to determine if samples should be collected at a given site. Samples are never collected from a site if the flow is stagnant or if the location is an isolated pool without connectivity to the upstream and downstream stretches within sight. Finally, CCAMP

staff routinely takes photos from the monitoring site looking upstream to show the condition of the monitoring site.

#11 US Environmental Protection Agency

Comment 11.1
The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to support the proposed fecal coliform, E. coli and total coliform bacteria (collectively referred to as "fecal indicator bacteria") total maximum daily loads (TMDL) for fourteen waterbodies, including all tributaries of the Santa Maria River draining to Santa Maria River Estuary and Oso Flaco Creek draining to Oso Flaco Lake watersheds of the Lower Salinas (sic), and the associated draft Basin Plan Amendments, dated November 1, 2011. The TMDLs meet federal regulatory requirements under the Clean Water Act and appropriately set numeric targets, waste load and load allocations (WLA & LA), and phased load reduction and milestones for the water contact recreation (REC-1) beneficial use, and for the shellfish harvesting (SHELL) beneficial use, which also applies in the Santa Maria River Estuary waterbody.

We appreciate the improvements made to the previous version of the proposed TMDLs, as well as your responsiveness to our comments on the previous draft EPA supports the adoption of the TMDLs and looks forward to approving them through the state submittal process.

Staff response
Staff appreciates the comment.

Comment 11.2
We find the TMDL can be improved by including the following clarifications:

The Draft Project Report, dated November 11, identifies fifteen waterbody-pollutant impairments in fourteen waterbodies. We appreciate that the documentation addresses impairments included in the 2008-2010 303(d) list, as well as six new impairments, for fecal coliform in La Brea Creek and Oso Flaco Lake, and E. coli in Main Street Canal, Nipomo Creek, Orcutt Creek, and Oso Flaco Lake. TMDLs are included for fecal coliform and E. coli for all 14 waterbodies, supporting the REC-1 beneficial use. A TMDL for total coliform is also included for the Santa Maria River Estuary, supporting the SHELL beneficial use. These existing and new impairments, and TMDLs to support them (totaling 29 TMDLs), are appropriate, addressing existing water quality objectives (for fecal coliform and total coliform) and EPA guidance for E. coli). However, allocations for fecal coliform and E. coli appear to have been omitted for the Santa Maria River Estuary; only allocations for total coliform are included. We suggest including the allocations 1 and 3, for fecal coliform and E. coli, consistent with the TMDLs that are set for that waterbody. We would suggest this clarification in the Resolution language, as well as the Project Report language.

Staff response

In Table 20, Allocations to responsible parties, in the cell just below the Santa Maria River Estuary, is a cell entitled, "All impaired waterbodies." This includes the Santa Maria Estuary and the Estuary is given an allocation for both fecal coliform and *E. coli*. Staff separated Santa Maria River Estuary out in this table because the Estuary is the only waterbody that is given a total coliform allocation. The total number of TMDLs in this Project total 21.

Comment 11.3
We suggest including the NPDES and other permit numbers for all permitted facilities, in order to ensure consistency between the TMDLs and NPDES permitting and permit renewals. For example, The NPDES permit number for the Cuyama Community Services District appears to have been omitted (p. 55). A table listing all the permits and their numbers could be helpful.

Staff response
Staff included the permit numbers in a list under section 4.5.1. Sanitary Sewer Collection Systems.

References

Atwill, Edward R., et. al. *Ambient monitoring of bacterial indicators and enteric pathogens(Salmonella & E. coli 0157:H7) along California's central coastal watersheds*. Contract. No. 08-051-130. January 2011.

CCAMP – Water quality and flow data.

Gibson, C. 2005. Schematic Processor Bacterial Loadings Model. University of Texas at Austin, Center for Research in Water Resources, Department of Civil Engineering. Accessed May 2009 at http://www.crwr.utexas.edu/gis/gishydro05/Modeling/WaterQualityModeling/BacteriaModel.htm

Ishii, S., W. B. Ksoll, R. E. Hicks, and M. J. Sadowsky (2006), *Presence and growth of naturalized Escherichia coli in temperate soils from Lake Superior watersheds,* Applied and Environmental Microbiology, 72(1), 612-621.

Jolley, D. Buck, et. al. Estimate of herpetofauna depredation by a population of wild pigs. Journal of Mammalogy, 91(2):519-524, 2010.

Mississippi Dept. of Environmental Quality. 2000. Fecal Coliform TMDL for the Big Black River Basin, Mississippi.

Montana Department of Environmental Quality. 2009. Big Hole River Watershed Nutrient TMDL, Appendix 1.

Oklahoma Dept. of Environmental Quality. 2006. TMDL Development for Cobb Creek Watershed.

USEPA. January 2001. Protocol for developing pathogen TMDLs. EPA 841-R-00-002.

USEPA. DRAFT Recreational Water Quality Criteria. Office of Water 820-D-11-002, December 9, 2011.

Wuertz, Stefan and Schriewer, Alexander. *Scientific Peer Review of (1) TMDLs for Fecal Coliforms in the Cuyama River, Santa Maria River, Orcutt-Solomon Creek, Oso Flaco Creek Watersheds and for Total Coliform in the Santa Maria River Estuary, and (2) of the Animal and Human Waste Discharge Prohibition*. UC Davis, May 15, 2008.