

California Ocean Plan
Triennial Review and Workplan
2005-2008



**California Environmental Protection Agency
State Water Resources Control Board
Division of Water Quality
Ocean Standards Unit**

Adopted on Date ??, 2005

Draft Date 9/16/05



STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

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Ocean Standards Unit

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Introduction

The California Ocean Plan (Ocean Plan) is the State's water quality control plan for ocean waters. It lists "beneficial uses" of California's ocean waters which need to be protected; establishes "water quality objectives" necessary to achieve protection for those beneficial uses; identifies areas where discharges are prohibited, and sets forth a program of implementation (including waste discharge limitations, monitoring, and enforcement) to ensure that water quality objectives are met. The State Water Resources Control Board (State Water Board) adopted the Ocean Plan in 1972, and has since periodically revised the Plan.

Federal law [Section 303(c)(1) of the Clean Water Act (CWA)] and State law [Section 13170.2(b) of the California Water Code (CWC)] require that ocean water quality standards be reviewed at least once every three years. The purpose of the triennial review of the Ocean Plan is to guarantee the continued adequacy of water quality standards.

The triennial review of the Ocean Plan identifies issues that should be examined by the State Water Board to determine if the Ocean Plan should be amended. The triennial review process, as implemented by the State Water Board, consists of an initial public hearing to identify the most important issues to be addressed; followed by staff evaluation of highest priority options for Ocean Plan amendments and preparation of a Workplan; a public workshop and meeting on the Workplan; and State Water Board action to resolve identified issues, through amendments to the Ocean Plan, if needed.

Staff has recommended a priority option for each issue, and a personnel budget identifying the resources necessary to complete the review and analysis for that option. To give detailed attention to each issue concurrently would far outstrip available personnel resources. Resolution of many issues may require the help of stakeholders, scientific research organizations and other agencies, such as municipal discharge authorities and the U.S. Environmental Protection Agency (U.S.EPA).

The higher priority issues approved for review will be addressed over the next three-year period following State Water Board approval of the Workplan. As issues are resolved, the Ocean Plan will be amended as necessary in accordance with State and federal laws and regulations.

This Workplan is arranged topically, with references to appropriate sections of the Ocean Plan. A brief summary is offered describing the rationale for the selection of each issue. Final selection of issues to be reviewed, and assignment of priorities, will be made by the State Water Board at a board meeting, following a public workshop.

The Triennial Review Public Hearing

The State Water Board held a public scoping meeting regarding four potential Ocean Plan amendments on January 23, 2004. The scoping meeting was continued on February 3, 2004 at the State Water Board workshop at the direction of the Board. Two of the four potential Ocean Plan amendments being considered at that time were from the 1999-2002 Triennial Review process: 1) Choice of Indicator Organisms for Water-Contact Bacterial Standards; 2) Establishing a Fecal Coliform Standard for Shellfish Harvesting Areas. Two other potential amendments were a result of changes to the Public Resources Code and staff recommendations, respectively: 3) Reclassifying “Areas of Special Biological Significance (ASBS)” to “State Water Quality Protection Areas (SWQPA)” and establishing implementation provisions for discharges into SWQPA; and 4) Adding “Reasonable Potential” Language.

During these State Water Board workshops, the Board directed staff to conduct a new triennial review to determine if there are additional issues that should be reviewed for potential revision of the Ocean Plan. A Public Hearing on May 24, 2004 initiated the 2004-2007 California Ocean Plan Triennial Review process.

The purpose of the May 24, 2004 public hearing was to solicit comments from the public regarding *any and all* issues relevant to the Ocean Plan. For example, comments were received on the four potential Ocean Plan amendments then being considered by the State Water Board staff, unresolved issues from previous Triennial Reviews, and other issues for the State Water Board staff to consider for future amendments of the Ocean Plan. Based upon input received during the public review period, this Workplan has been prepared for State Water Board approval to define the scope of the current review of the Ocean Plan.

The State Water Board adopted three of the four potential Ocean Plan amendments in January and April 2005. Water contact bacterial standards were added to the Ocean Plan by Resolution 2005-0013. Reasonable potential language and ASBS name changes were added to the Ocean Plan by Resolution 2005-0035. In addition, Resolution 2005-0035 added a requirement to review all exceptions to the Ocean Plan at the time of the Triennial Review. These amendments were submitted to the Office of Administrative Law (OAL) on August 29, 2005. Upon receiving approval from OAL, staff will submit these amendments to the U.S. EPA for final approval.

Table 1. Summary of Issues Raised During the May 2004 Triennial Review Hearing.

2005-2008 Workplan Issue Number	Issue	1999 Workplan Issue Number
1.	Proposed Amendment 1, Add <i>Enterococcus</i> and Revise Fecal Water Contact Standard	C3a
2.	Proposed Amendment 2, Fecal Coliform Standard for Shellfish	C3e
3.	Proposed Amendment 3, ASBS/SWQPA	n/a
4.	Proposed Amendment 4, Reasonable Potential	n/a
5.	Mass Emission Regulation	C1b
6.	Control of Ballast Water Discharges and Invasive Species	C1c
7.	Revision of Beneficial Uses	C2a
8.	Review of WQ Objectives for Dioxins and Related Compounds	C3b
9.	Biological Objectives	C3c
10.	Desalination Facilities and Brine Disposal	C3d
11.	Sediment Quality Objectives	C3f
12.	Site Specific Objectives	C3g
13.	Review Table B Chemical WQ Objectives	C3h
14.	Regional Ambient WQ Monitoring	C4a
15.	Standard Monitoring & Reporting Requirements	C4b, C4h
16.	TRE and TIE Implementation	C4d
17.	Control of Stormwater Discharges	C4f
18.	Nonpoint Source Control	C4g
19.	Expression of Metals in Ocean Plan	n/a
20.	Natural Light WQ Objective	n/a
21.	Mixing Zones and Dilution	n/a
22.	Suspended Solids Regulation in Table A	n/a
23.	Plastic Debris Regulation	n/a
24.	Acute Toxicity Definition	n/a
25.	Nonsubstantive changes	n/a

Table 2. Summary of Issues Raised by Each Commenter

Commenter	2005-2008 Workplan Issue Number																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Algalita Marine Research Foundation																								X
2. California Association of Sanitation Agencies (CASA) and Tri-TAC	X	X	X	X								X				X								
3. California Department of Transportation (Caltrans)			X					X				X					X							
4. California Stormwater Quality Association (CASQA)	X		X				X				X		X				X							
5. Calleguas Municipal Water District											X											X		
6. Coalition for Practical Regulation (CPR)	X	X	X	X			X		X			X		X			X	X						
7. City of Santa Cruz Public Works Department	X			X																				
8. Environmental Advocates		X																						
9. Monterey Bay National Marine Sanctuary	X		X																					
10. Ocean Conservancy	X		X			X					X	X		X										
11. Regional Water Quality Control Board - Central Coast	X	X		X												X			X			X		
12. San Francisco Public Utilities Commission	X		X	X				X				X					X				X			
13. So. California Alliance of Publicly Owned Treatment Works (SCAP)	X	X	X	X																				
14. Southern California Edison																						X		
15. Western States Petroleum Association (WSPA)	X	X	X	X		X																		
16. United States Environmental Protection Agency	X	X	X	X	X	X			X		X		X	X	X		X					X	X	

Explanation of the Issue Summaries

For each issue in this Workplan, State Water Board staff has listed the commenters, a description of the issue and a summary of the verbal and written comments, one or more suggested alternatives for staff action, and a recommended priority. Each issue summary contains the following sections:

Issue:

A brief description of the issue.

Raised By:

A list of the people (and their affiliation) that commented on the issue.

Discussion:

A description of the issue and a brief summary of the commenters testimony and comments.

In those cases when amendments have already been adopted no further information is given beyond the Discussion.

Alternative(s) for Staff Action:

Staff lists up to three alternatives for resolution of the issue. Alternatives may include a minimum, baseline, or augmented budget effort. For each alternative, the estimated staff effort and estimated contract commitment is presented. The estimated effort covers the entire three-year period of the Triennial Review. For less complex issues, only one alternative is suggested.

Minimum Effort

The minimum time necessary to complete a preliminary evaluation of the issue based upon readily available information. If no changes are necessary or staff resources are not available then this may sometimes be “no effort.”

Baseline Effort

The effort necessary to perform the issue analysis with existing Ocean Standards Unit personnel. The amount given would fall within the current available staff in the Ocean Unit but in some cases the baseline effort would require the re-direction of staff resources away from other projects. This alternative provides for a much more detailed analysis of issues than the minimum effort.

Augmented Budget Effort

This would provide for more detailed investigations into areas that staff believes require more effort than can be performed with available staff, or may include estimated contract amounts if work can not be performed in-house. An augmented budget effort was not always presented in the alternatives.

Staff Recommendation:

A suggestion is made for which alternative staff action should be performed.

Recommended Priority:

Staff grouped each of the issues into one of three priority categories: High, Medium, or Low. Staff arrived at each priority by evaluating the following: whether resolution of the issue would solve a significant water pollution problem, ease of implementation, relevance to the Ocean Plan, staff perception of public concern, and available staff resources. Low priority issues include those issues that should be eliminated from further study at this time. Medium priority issues may be retained for further study in the next Triennial Review or may be recommended for only minimal efforts or baseline efforts until that time, depending on the availability of staff resources. High priority issues will all be recommended for action during the period of this workplan. If there is a conflict in terms of staff resources between addressing medium and high priority issues, high priority issues will of course take precedence.

Issue Summaries

Issue 1: Proposed Amendment 1, Add Enterococcus and Revise Fecal Water Contact Standard.

Raised By:

California Association of Sanitation Agencies (CASA) and Tri-TAC,
California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR),
City of Santa Cruz Public Works Department,
Ocean Conservancy,
Regional Water Quality Control Board - Central Coast,
San Francisco Public Utilities Commission,
So. California Alliance of Publicly Owned Treatment Works (SCAP),
Western States Petroleum Association (WSPA),
United States Environmental Protection Agency
Issue: Choice of Indicator Organisms for Water-Contact Bacterial Standards

Discussion:

The 2001 Ocean Plan contained a total and fecal coliform water-contact standard, and in the bacterial assessment and remedial action provision it required the measurement of enterococcus at all stations where total and fecal coliforms are sampled. One aspect of this issue involved the choice of an indicator organism. In 1986, U.S.EPA recommended that states adopt an enterococcus standard for marine waters, based on epidemiological studies conducted in east coast waters. Another aspect of this issue, originally raised by the Department of Health Services (DHS), involved amending the fecal coliform standard for water-contact recreation from 200 organisms per 100 ml to 110 per 100 ml.

The adequacy of total and fecal coliform bacteria as indicators of human disease-causing organisms had been questioned for a number of years. Bacterial indicator organisms may not be reliable predictors of non-bacterial pathogens, such as enteric viruses or protozoans. State Water Board staff had concerns that the correlations developed in the U.S.EPA studies would not be applicable to the cooler California waters.

Also influencing this issue was Assembly Bill 411 (AB 411), which was chaptered in October 1997, requiring the DHS, in consultation with local health officers and the public, to establish minimum standards for the sanitation of public beaches. This Bill and the resulting regulations pertain to county health agencies and not to the publicly owned treatment works (POTW) dischargers covered under the Ocean Plan, there is a common link. The Ocean Plan's bacterial water contact standards and DHS' regulation implementing AB 411 are both intended to protect the health of persons engaged in water contact recreational activities.

In 2000, the CWA was amended to require states with coastal recreation waters to adopt water quality standards for pathogens and pathogen indicators for which U.S.EPA has section 304(a)

criteria guidance. In its 2000 Draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria, U.S.EPA strongly encouraged states that have not already done so to adopt its 1986 recommendations and to make the transition to its recommended indicator organisms during triennial review cycles occurring in Fiscal Years 2000-2002. U.S.EPA published the Final Rule in the Federal Register on November 16, 2004 in which it proposed to establish water quality criteria for bacteria for coastal recreation waters in specified states and territories that have not adopted its CWA section 304(a) criteria guidance.

Several comments were received after the December 2003 Public Scoping meeting. These comments supported the inclusion of an enterococcus water-contact standard because it can be an important indicator of adverse human health effects when used in combination with the fecal to total coliform ratio. Commenters also asked that the State Water Board requirements be consistent with the DHS. Some of the comments specifically recommend adoption of U.S.EPA bacteria standards for recreational marine standards (*Implementation Guidance for Ambient Water Quality Criteria for Bacteria, 2002*). The use of geometric mean for use as water-contact standards was supported because it is more representative of water quality conditions than a single-sample or mathematical model. Some comments recommended that California adopt enterococcus as a single indicator organism for water-contact bacteria standards. Comments included a recommendation for use of acceptable analytical methods for ocean bacteria of epidemiological significance. U.S.EPA strongly urged the State Water Board to proceed with adoption of the water-contact bacterial standards for California. When adopted, California's coastal ocean waters would be excluded from the Final Rule; only bays and estuaries will be included.

In January 2005 the State Water Board adopted an indicator bacteria amendment that:

1. added an enterococcus geometric mean and single sample standard to the Ocean Plan.
2. added single sample maximum standards for total and fecal coliform, and required additional monitoring if any of these standards are violated;
3. required monitoring for only total coliform at offshore stations; and
4. strongly encouraged use of the geometric mean bacterial objectives as the principal tool for assessing whether a water is impaired.

Status:

This amendment was adopted in January 2005; no further staff is work required.

Issue 2: Proposed Amendment 2, Fecal Coliform Standard for Shellfish.

Raised By:

California Association of Sanitation Agencies (CASA) and Tri-TAC,
Coalition for Practical Regulation (CPR),
Environmental Advocates,
Regional Water Quality Control Board - Central Coast,
So. California Alliance of Publicly Owned Treatment Works (SCAP),
Western States Petroleum Association (WSPA),
United States Environmental Protection Agency
Issue: Adoption of Fecal Coliform Standard for Shellfish Harvesting Area

Discussion:

The California Ocean Plan (Ocean Plan) currently provides a total coliform standard of 70 organisms per 100 ml for waters of all areas where shellfish may be harvested for human consumption. There is no standard for shellfish tissue currently in the Ocean Plan.

The Department of Health Services (DHS) has suggested adding a fecal coliform standard of 14 organisms per 100 ml (milliliters). The addition of a fecal coliform requirement to the existing shellfish harvesting standard would make the Ocean Plan consistent with the National Shellfish Sanitation Program (NSSP) guidelines for commercial shellfish growing areas. During the 1992 Triennial Review, comments suggested that a shellfish tissue standard also be added to the Ocean Plan.

The U.S. Environmental Protection Agency (EPA), in their 2002 Draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria, continues to recommend the use of fecal coliform to protect shellfishing waters (EPA 2002). The U.S.EPA states that “If at such time, data and information are compiled that support the use of these indicators in shellfishing waters, the U.S.EPA will revisit this issue and consider the development of a revised standard for consumption of shellfish. In the meantime, the U.S.EPA continues to recommend the use of fecal coliforms for protection of shellfish waters”

Comments received after the December 2004 Public Scoping meeting suggest replacement of the total coliform standard for Shellfish Harvesting Area with fecal coliform standard recommended by DHS. It is recommended that State Water Board make clear that this standard is only applicable to shellfish growing area approved by DHS and that the standard is to be applied as a geometric mean consistent with DHS practice. One commenter strongly suggests implementing the fecal coliform standard for shellfish harvesting without use of a compliance schedule.

The proposed amendment described in the 2003 Scoping Document was tabled in 2004 and 2005 due to staff resource limitations, but may be further developed and brought back to the Board at a later date.

Alternative(s) for Staff Action:

Minimum Effort

Do not change the Ocean Plan and leave the total coliform standard in place for all waters where shellfish are harvested for human consumption.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff would complete development of the proposed amendment to the Ocean Plan, which would establish a fecal coliform standard of 14 organisms per 100 ml for shellfish harvesting waters. Staff would need to provide an on-going procedure by which Regional Boards could for identifying active or potential shellfish harvesting areas where the standard would be implemented and monitored. Towards this end staff would work with Regional Boards, the Department of Fish and Game (DFG), and the DHS to identify areas used for commercial and recreational shellfish harvesting. Staff would monitor the progress of the studies at the individual commercial shellfish growing areas and also determine how this standard will impact publicly owned treatment works monitoring programs.

Estimated Staff Effort: 0.5 PY

Augmented Budget Effort

In addition to the above, and in conjunction with DHS and the DFG, staff would design and conduct a study to measure fecal coliform within selected recreational and commercial shellfish harvesting areas. Staff would also investigate and evaluate a shellfish tissue standard for potential inclusion in the Ocean Plan.

Estimated Staff Effort: 1.0 PY

Estimated Contract Commitment: \$200,000

Staff Recommendation:

Baseline Effort

Recommended Priority:

High

Issue 3: Proposed Amendment 3, Reclassifying Areas of Special Biological Significance (ASBS) to State Water Quality Protection Areas (SWQPAs) and establishing implementation provisions for discharges into SWQPAs.

Raised By:

Algalita Marine Research Foundation,
California Association of Sanitation Agencies (CASA) and Tri-TAC,
California Department of Transportation (Caltrans),
California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR),
Monterey Bay National Marine Sanctuary,
Ocean Conservancy,
San Francisco Public Utilities Commission,
So. California Alliance of Publicly Owned Treatment Works (SCAP),
Western States Petroleum Association (WSPA),
United States Environmental Protection Agency

Discussion:

The original proposed amendment (December 2003 scoping document) would have replaced the ASBS term with SWQPAs and would have modified the prohibitions and requirements applicable to such areas in order to address AB2800 requirements in the Public Resources Code (PRC). Some commenters stated positions which supported the change and felt it was a ministerial move. Some felt strong opposition to the action. The environmental community felt that the SWQPA discharge protections provided by AB2800 was not as stringent as the 2001 Ocean Plan ASBS prohibition, and felt the change would roll back protections for some of the state's most unique marine habitats.

However, in 2004 SB512 further modified the PRC. The following language was added to PRC section 36710(f): "Areas of special biological significance are a subset of state water quality protection areas, and require special protection as determined by the State Water Resources Control Board pursuant to the California Ocean Plan..."

Based on changes to the PRC per SB 512, and in response to comments received regarding the December 2003 scoping document, staff modified the proposed amendment to: 1) incorporate the classification of ASBS as a subset of SWQPAs per the Public Resources Code 2) change the names of specific ASBS to correspond to name changes for other Marine Managed Areas, 3) require that exceptions would be reviewed during the Triennial Review, and 4) add an appendix listing all current exceptions to the California Ocean Plan. The modified amendment was adopted by the State Water Board in April 2005.

Status:

A modified version of this amendment was adopted in April 2004; no further staff is work required.

Issue 4: Proposed Amendment 4, Reasonable Potential.

Raised By:

California Association of Sanitation Agencies (CASA) and Tri-TAC,
Coalition for Practical Regulation (CPR),
City of Santa Cruz Public Works Department,
Regional Water Quality Control Board - Central Coast,
San Francisco Public Utilities Commission,
So. California Alliance of Publicly Owned Treatment Works (SCAP),
Western States Petroleum Association (WSPA),
United States Environmental Protection Agency

Discussion:

At the January 2004 Ocean Plan Scoping Meeting, staff proposed adding reasonable potential language to the Ocean Plan. This language would require permit writers to evaluate a discharger's monitoring data when deciding if an effluent limitation is required. All of the commenters were supportive of completing the proposed reasonable potential amendment. Some commenters suggested that a reasonable potential approach in the Ocean Plan should not apply to stormwater discharges or wet weather flows from combined sewer overflows.

A scientific peer review was conducted on the staff proposal for this amendment. After the peer review was completed the Board adopted the staff proposal in April 2005.

Status:

This Amendment was adopted in April 2005; no further staff work is required.

Issue 5: Mass Emission Regulation.

Raised By:

United States Environmental Protection Agency

Discussion:

The current Ocean Plan does not consider the mass emission of all sources of a pollutant. USEPA encouraged the State to carefully monitor solids loadings and biological communities to ensure that loadings do not approach detrimental levels.

Alternative(s) for Staff Action:

Minimum Effort

Staff would delay addressing mass emission regulation until progress has been made in related issues, such as Sediment Quality, Site-Specific Objectives, Nonpoint Source Control, Stormwater Discharge Control, and Regional Monitoring. These elements are required to assess relative contributions of pollutants entering the coastal environment from multiple point and non-point sources.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff will evaluate the concerns raised by the commenters, and would work with RWQCB staff to assess the progress made on a regional basis in implementing mass emission limits.

Estimated Staff Effort: 0.2 PY

Staff Recommendation:

Minimum Effort

Recommended Priority:

Medium

Issue 6: Control of Ballast Water Discharges and Invasive Species.

Raised By:

Ocean Conservancy, NRDC and Defenders of Wildlife
United States Environmental Protection Agency
Western States Petroleum Association

Discussion:

Should the California Ocean Plan be amended to regulate the discharge of vessel wastes? The present California Ocean Plan provides general requirements for the management of waste discharge to the ocean including: “Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a health and diverse marine community.” In addition, the Ocean Plan includes the following narrative water quality objective that applies to the discharge of non-indigenous species into coastal marine waters: “Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.” However, the Ocean Plan (Introduction, Section C.2.) states that: “This plan is not applicable...to vessel wastes...”

Commenters from the environmental community recommended that the STATE WATER BOARD take a strong role in supporting and strengthening existing federal and state management efforts and develop and implement a comprehensive management plan, in coordination with Department of Fish and Game, the State Lands Commission, and Boating and Waterways, to address non-indigenous species arriving from a variety of introduction pathways and that the Ocean Plan should be revised to provide for such an interagency effort. The regulated community recommended that no additional resources be spent on this issue, as it is addressed in the California Marine Invasive Species Act. U.S.EPA strongly urges the State Water Board to give high priority attention to this issue, because of its ecological and economic significance, and in particular, to review the U.S. Coast Guard’s proposed voluntary national guidelines for ballast water exchange to determine whether they are likely to be adequate to protect California’s ocean waters.

Recognizing the threat of new invasions from ballast water and the absence of a mandatory national ballast water management program, the California State Legislature passed Assembly Bill 703 during the 1999 legislative session to regulate ballast water discharges. The Ballast Water Management for Control of Nonindigenous Species Act became effective on January 1, 2000, and established a statewide multi-agency program with the intent to control the introduction and spread of nonindigenous aquatic species in the waters of the State. Responsible agencies identified in the Act include the California State Lands Commission, California Department of Fish and Game, State Water Board and the Board of Equalization . Each agency is required to work in cooperation with the others in developing reports and conducting research into the extent of current invasion, and potential long-term solutions to the problem of NAS introductions. Unfortunately, the Act only applies to those vessels that enter California waters after operating outside the U.S. Exclusive Economic Zone. Ballast water is an important issue in California and can lead to unwanted biological invasions and degradation of beneficial uses.

Regarding other vessel wastes, current State laws (three) already prohibit waste discharges from cruise ships. AB 121 prohibits the discharge of oily bilge water and sewage sludge. AB 2093 prohibits the discharge of graywater and other wastes except sewage. AB 2672 requires the State Water Board to get authority from USEPA to prohibit the discharge of sewage (a.k.a. blackwater) through the establishment of no discharge zones in State waters. Further legislation is pending (SB771) that would extend this prohibition to all vessels, and include the various waste streams of commercial vessels.

Alternative(s) for Staff Action:

Minimum Effort

Ocean Unit staff will work with other Division of Water Quality staff (the Nonpoint Source and NPDES Units) to continue to monitor legal and programmatic developments.

Estimated Staff Effort: 0.1 PY

Baseline Effort

In addition, Ocean Unit staff will develop a proposed amendment to the Ocean Plan to make it applicable to all vessel wastes consistent with the relevant state and federal statutes.

Estimated Staff Effort: 0.25 PY

Staff Recommendation:

Baseline Effort

Recommended Priority:

High

Issue 7: Revision of Beneficial Uses.

Raised By:

California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR)

Discussion:

The individual Regional Water Quality Control Boards (RWQCBs) have Basin Water Quality Control Plans (Basin Plans) which list and define the beneficial uses to be protected. The lists of beneficial uses in the Basin Plans are not entirely consistent with each other, or with the Ocean Plan. The Regional Water Boards along the coast have used these lists to designate the level of protection which will be given to the beneficial uses in coastal waters. A question has arisen regarding the importance of these differences, and if the Ocean Plan and the individual Basin Plans should be amended to make the lists of beneficial uses consistent.

Commenters felt that this issue remains unresolved from previous Triennial Reviews and is a high priority issue. Others felt that the State Board should develop a tiered system of beneficial use categories and sub-categories which may provide flexibility in addressing stormwater discharges, and providing consistency with the Ocean Plan and Regional Basin Plans.

The Ocean Plan's list of beneficial uses are specific to the near coastal ocean waters of the state. While it would be good if the Basin Plan and Ocean Plan beneficial uses were identical for the near coastal ocean waters, it is not essential. If a conflict exists between the protection of beneficial uses as described in Ocean Plan and the Basin Plans, and the protections afforded by the Ocean Plan are more stringent, then the Ocean Plan controls. More stringent protections provided by a Basin Plan may be applied by a Regional Board, but not less stringent.

Alternative(s) for Staff Action:

Minimum Effort

No action at this time

Estimated Staff Effort: 0 PY

Baseline Effort

Work with the Regional Board staff and the Basin Planning Unit of the State Board to examine the list of beneficial uses as listed in Chapter 1 of the Ocean Plan and State Water Board Administrative Manual. Determine if the beneficial uses for ocean waters in each coastal RWQCB Basin Plan: (a) are consistent with the uses in the Ocean Plan, (b) represent a logical sub-category of a use in the Ocean Plan, or (c) should be modified for clarity and greater guidance for implementation within the regulated and environmental community.

Estimated Staff Effort: 0.25 PY

Staff Recommendation:

Minimum Effort

Recommended Priority:

Low

Issue 8: Review of WQ Objectives for Dioxins and Related Compounds.

Raised By:

California Department of Transportation (Caltrans),
San Francisco Public Utilities Commission,

Discussion:

The California Ocean Plan water quality objective for tetrachlorodibenzo-dioxin (TCDD) equivalents is 3.9×10^{-9} micrograms/liter (0.0000000039 micrograms/liter.) TCDD equivalents are defined as the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-TCDFs) multiplied by their respective toxicity factors. The toxicity factors are provided in Appendix I of the Ocean Plan.

Commenters stated that dioxins and furans are ubiquitous in urban runoff at concentrations much higher than water quality standards. Because of this, staff should consider a change in the application of the dioxin standard. In addition, staff is aware that the toxicity equivalent factors in Appendix I of the Ocean Plan do not reflect the latest values used by the World Health Organization.

Alternative(s) for Staff Action:

Minimum Effort

Revise the toxicity factors for dioxins and furans in Appendix I to be consistent with World Health Organization values.

Estimated Staff Effort: 0.1 PY

Baseline Effort

In addition, staff would consult with the Office of Environmental Health Hazard Assessment (OEHHA) regarding human health concerns, while independently placing special emphasis on other aspects of this issue that are of particular interest to the STATE WATER BOARD, including aquatic life impacts, fate in aquatic systems, and bioaccumulation in the marine environment. Staff would work with other interested parties to include dioxin monitoring in regional monitoring programs.

Estimated Staff Effort: 1.0 PY

Staff Recommendation:

Minimum Effort

Recommended Priority:

Medium

Issue 9: Biological Objectives.

Raised By:

Coalition for Practical Regulation (CPR),
United States Environmental Protection Agency,

Discussion:

Section E. in the 2001 Ocean Plan, *Biological Characteristics*, contains the narrative biological objective “marine communities... shall not be degraded.” The recent commenters made reference to the 1999-2002 Triennial Review with regard to numeric biological objectives. U.S.EPA has encouraged the State Water Board to place a high priority on completing the development of defensible numeric biological objectives. Most of the other commenters in the 1999-2002 Triennial Review also stated support for the concept. However, the majority stated that it should be a low priority until there is enough information to support the use of numeric biological objectives. Those opposing the adoption of numeric criteria cited problems with the interpretation (e.g., differentiating anthropogenic from natural events), and questioned their application on a statewide basis.

The Coastal Benthic Response Index (BRI) has recently become accepted as a tool in analyzing impacts from ocean discharges in the Southern California Bight. The BRI, in conjunction with the regional data from the Southern California Bight regional surveys may form a basis for developing monitoring requirements. Significant research and stakeholder efforts are still necessary to extend the BRI coast-wide (i.e., to central and northern California), and to develop numeric criteria.

Alternative(s) for Staff Action:

Minimum Effort

Continue to evaluate the development and application of biological objectives for marine waters in other states, as resources allow. Staff work should relate this issue to amending the Ocean Plan monitoring requirements to incorporate biological measures.

Estimated Staff Effort: 0.1 PY

Baseline Effort

In addition to the minimum effort listed above, contract with the Southern California Coastal Water Research Project, with a subcontractor for northern California waters, to apply the Benthic Response Index approach for ocean water discharges to northern California.

Estimated Staff Effort: 0.2 PY per year

Estimated Contract Commitment: \$100,000

Augmented Budget Effort

In addition to the work listed above, staff would contract with the Southern California Coastal Water Research Project, with a subcontractor for northern California waters, to conduct a stakeholder and research process for biological objectives.

Estimated Staff Effort: 1.0 PY

Estimated Contract Commitment: \$700,000.

Staff Recommendation:

Minimum Effort

Recommended Priority:

Medium

Issue 10: Desalination Facilities and Brine Disposal.

Raised By:

Calleguas Municipal Water District,
Ocean Conservancy

Discussion:

Currently, there are no California Ocean Plan Water Quality Objectives that apply specifically to brine waste discharges from desalination plants or ground water desalting facilities. Untreated brine waste discharged into the ocean "behaves" differently than either waste water treatment plant freshwater effluent or the brine waste-freshwater mixture. The "brine waste" plume is denser than the receiving ocean water due to a much higher salinity and tends to settle on the ocean bottom. As a result, a brine waste plume can have an adverse effect on the bottom-dwelling marine organisms.

Commenters suggested that the Ocean Plan be modified to facilitate permitting of facilities which discharge brine waste. An alternative mixing zone definition was suggested. The Ocean Conservancy believes that there is no basis to exempt brine waste discharges from the Table B water quality objectives.

At present, there is not enough information available to develop water quality objectives specific to brine discharges in Table B of the Ocean Plan. In the interim, it may be appropriate for Regional Water Quality Control Boards to issue waste discharge requirements containing site-specific effluent limitations based on the physical and toxicity characteristics of each individual brine discharge.

Alternative(s) for Staff Action:

Minimum Effort

Staff would not direct any effort to this issue. Make no changes to the existing Ocean Plan.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff will continue to review studies examining the environmental impacts of desalination wastes on receiving waters as they become available. Staff may defer to Regional Water Quality Control Boards in situations where site specific desalination water quality objectives are needed.

Estimated Staff Effort: 0.1 PY

Augmented Effort

In addition to the baseline effort, staff would hire a contractor to conduct studies evaluating what environmental impacts desalination waste discharges may have on receiving waters. The results may be used in the development of water quality objectives specific to desalination discharges.

Estimated Staff Effort: 0.5 PY

Estimated Contract Commitment: \$500,000

Staff Recommendation:

Baseline Effort

Recommended Priority:

Medium

Issue 11: Sediment Quality Objectives.

Raised By:

Ocean Conservancy,
United States Environmental Protection Agency

Discussion:

The 1999-2002 Ocean Plan Triennial Review listed the development of numeric sediment quality objectives (SQOs) for ocean water a higher priority. The 2001 California Ocean Plan contains narrative requirements that protect sediment quality. The State Water Board Ocean Unit is currently developing SQOs for bays and estuaries. The approach under development for these non-ocean waters would utilize a multiple line of evidence (MLOE) approach. The MLOE approach to assess sediment quality is well supported in the scientific literature and is utilized by state and federal agencies responsible for managing and assessing polluted sediments. The use of a single tool such as sediment toxicity or chemistry and numeric thresholds to assess sediment quality is inappropriate. Confounding factors and limitations of the tools or methods severely limit the ability to interpret this information with confidence. A MLOE monitoring approach and corresponding tools have been developed and applied to the assessment of offshore sediments within the southern California Bight. However, significantly less progress has been made within waters north of Point Conception.

Recent comments from U.S.EPA and the Ocean Conservancy made reference to the 1999-2002 Triennial Review with regard to sediment quality objectives and encouraged the State Water Board to place a high priority on this issue. Written comments received on the 1999-2002 Triennial Review included the following recommendations:

- SQOs should be developed on a site-specific or regional basis;
- Defer the development of SQOs until an appropriate strategy proves successful;
- Establish a working group of agency and scientific experts to address this issue; and
- Establish sediment quality evaluation procedures based on “sediment-associated constituent impacts.”

Alternative(s) for Staff Action:

Minimum Effort

Make no changes to the existing Ocean Plan narrative sediment objectives. This alternative would rely on the existing narrative sediment objectives to protect marine benthic biota. Rely on the minimum efforts described in Issue 9, Biological Objectives, to address only the benthic community and possibly monitoring.

Estimated Staff Effort: 0 PY

Baseline Effort

Utilize the Sediment Quality Advisory Committee, Scientific Steering Committee and Agency Coordination Committee (from the existing SQO effort for enclosed bays and estuaries) to assess appropriate strategies based upon the SQO policy under development for bays and estuaries. Ultimately these committees could assist the State Water Board in developing a sediment management policy that could be referenced in the Ocean Plan.

Estimated Staff Effort: 0.2 PY

Estimated Contract Commitment: \$100,000

Staff Recommendation:

Minimum Effort

Recommended Priority:

Low.

Issue 12: Site Specific Objectives.

Raised By:

California Association of Sanitation Agencies (CASA) and Tri-TAC,
California Department of Transportation (Caltrans),
California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR),
San Francisco Public Utilities Commission,

Discussion:

There are no provisions in the California Ocean Plan (Ocean Plan) describing procedures to develop site-specific objectives. Instead, the Ocean Plan provides that the Regional Water Quality Control Boards, when issuing waste discharge permits, can establish more restrictive water quality objectives and effluent limitations than those in the Ocean Plan as necessary to protect beneficial uses.

Commenters recommended that the State Water Board incorporate provisions and procedures for deriving site-specific water quality objectives into the Ocean Plan. Commenters pointed to the fact that the State Implementation Policy includes special provisions under which a site-specific objective may be considered.

Alternative(s) for Staff Action:

Minimum Effort

No Effort.

Estimated Staff Effort: 0 PY

Baseline Effort

Track the progress of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. If procedures for development of site-specific water quality objectives are adopted into the Policy, then determine if such provisions should be added to the California Ocean Plan.

Estimated Staff Effort: 0.1 PY

Staff Recommendation:

Minimum Effort.

Recommended Priority:

Low.

Issue 13: Review Table B Chemical WQ Objectives.

Raised By:

United States Environmental Protection Agency

Discussion:

USEPA recommended that attention be given to priority toxic pollutants for which USEPA criteria exist that are not currently addressed in the Ocean Plan. For example, the Ocean Plan lacks objectives for three pollutants that the U.S. EPA has recommended numeric criteria for: edrin aldehyde, 1,2,4-trans-dichloroethylen, and 1,2,4-trichorobenzene. The commenter also suggested that State Water Board staff perform an evaluation of whether chemicals that are regulated as chemical groups in Table B can be more effectively controlled by separate water quality standards.

Staff believes that the review, development and recommendation of Table B water quality objectives is a primary function and responsibility of the Ocean Unit. Appropriate numeric water quality standards are an essential part of any water quality regulatory program.

Alternative(s) for Staff Action:

Minimum Effort

Adopt USEPA recommended water quality criteria directly as Ocean Plan water quality objectives for those priority pollutants not currently addressed in Table B of the Ocean Plan.

Estimated Staff Effort: 0.25 PY

Baseline Effort

In addition, use California specific seafood consumption rates and risk values to derive an appropriate water quality objective for priority pollutants not currently addressed in Table B.

Estimated Staff Effort: 0.55 PY

Augmented Budget Effort

In addition to the baseline effort, derive water quality objectives for non-priority pollutants of emerging concern, such as pesticides.

Estimated Staff Effort: 1.0 PY

Staff Recommendation:

Baseline Effort.

Recommended Priority:

High.

Issue 14: Regional Ambient WQ Monitoring.

Raised By:

California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR),
Ocean Conservancy,
United States Environmental Protection Agency

Discussion:

The California Ocean Plan (Ocean Plan) contains provisions largely focused on the regulation of individual point source pollution discharges. There are no provisions in the Ocean Plan for monitoring collective pollution inputs to a marine region.

Commenters recommended an ecosystem-wide approach to water quality monitoring and to coordinate monitoring efforts of all of the Regional Water Quality Control Boards, the Southern California Coastal Water Research Project (SCCWRP), the San Francisco Estuary Institute (SFEI), and the Department of Fish and Game Marine Pollution Studies Laboratory. CASQA supported the concept of regional monitoring, but questioned whether the Ocean Plan is the appropriate vehicle for addressing this issue.

Staff has begun a series of public workshops to consider consistent monitoring elements for ocean discharge monitoring programs; these consistent monitoring elements will provide effective protections for valuable marine resources in a cost effective manner. Regional ambient monitoring may be included in the consistent monitoring elements. The first Model Ocean Discharge Monitoring Workshop was held on May 5, 2005. Staff is currently planning for additional workshops to follow through on this effort.

Alternative(s) for Staff Action:

Minimum Effort

Make no changes to the Ocean Plan for ambient monitoring.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff would continue with the Ocean Discharge Monitoring Workshops, seeking input from the regulated dischargers, environmental groups, other agencies, and the general public. This issue relates to work recommended for the following issue 15, Standard Monitoring & Reporting Requirements.

Estimated Staff Effort: 0.1 PY

Staff Recommendation:

Baseline Effort

Recommended Priority:

High.

Issue 15: Standard Monitoring & Reporting Requirements.

Raised By:

United States Environmental Protection Agency

Discussion:

Appendix III of the California Ocean Plan (Ocean Plan) includes standard monitoring procedures that provide direction to the Regional Water Quality Control Boards in developing monitoring programs to accompany discharge permits. These standard monitoring procedures reference analytical methods required for compliance with the bacterial, chemical, and toxicity requirements.

USEPA recommended that any modifications to the Appendix III standard monitoring requirements be worded carefully so as not to lock-in sampling, monitoring, or data management protocols that may quickly become outdated.

Staff has begun a series of public workshops to consider consistent monitoring elements for ocean discharge monitoring programs; these consistent monitoring elements will provide effective protections for valuable marine resources in a cost effective manner. The first Model Ocean Discharge Monitoring Workshop was held on May 5, 2005

Alternative(s) for Staff Action:

Minimum Effort

Make no changes to Appendix III.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff would continue with the Ocean Discharge Monitoring Workshops, seeking input from the regulated dischargers, environmental groups, other agencies, and the general public. Appendix III changes, if needed, would be made after consideration of the workshop input.

Estimated Staff Effort: 0.4 PY

Staff Recommendation:

Baseline Effort

Recommended Priority:

High.

Issue 16: TRE and TIE Implementation.

Raised By:

California Association of Sanitation Agencies (CASA) and Tri-TAC

Discussion:

This issue focuses on the need for Toxicity Reduction Evaluation (TRE) implementation guidance and *chronic marine Toxicity Identification Evaluations (TIE) methods and implementation for ocean waters*. If a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table B, a TRE is required. A TRE consists of four basic tasks: 1) identify sources of toxicity in the effluent, 2) isolate the sources, 3) evaluate alternatives to control the toxicity, and 4) confirmation of toxicity controls. A TIE is the identification phase of a TRE in which a series of chemical analytical procedures, combined with the toxicity test procedures, are used to identify the specific chemicals causing the toxicity in the effluent. Since the 1999-2002 Triennial Review, USEPA has prepared several documents that provide technical/method guidance and regulatory approaches and alternatives. These documents include:

Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA/833B-99/002, August 1999) (www.epa.gov/npdes/pubs/tre.pdf)

Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program, EPA, Office of Wastewater Management, Office of Regulatory Enforcement. March 27, 2001 (www.epa.gov/npdes/pubs/owmfinaltreetie.pdf)

EPA method manuals also include limited guidance on TIE. In 2004, only one commenter felt strongly about the need to make this a priority issue.

Alternative(s) for Staff Action:

Minimum Effort

Make no changes to the Ocean Plan.

Estimated Staff Effort: 0 PY

Baseline Effort

Engage technical organizations such as the Northern and Southern California Chapters of Society of Society of Environmental Toxicology and Chemistry to assist in the development of a TRE/TIE framework for ocean waters. The ultimate goal would be to provide guidance to

Regional Boards on what procedures to follow in the event of a chronic toxicity violation, and how many violations necessitate conducting a TRE/TIE.

Estimated Staff Effort: 1.5 PY

Staff Recommendation:

Minimum Effort

Recommended Priority:

Low.

Issue 17: Control of Storm Water Discharges.

Raised By:

California Department of Transportation (Caltrans),
California Stormwater Quality Association (CASQA),
Coalition for Practical Regulation (CPR),
San Francisco Public Utilities Commission,
United States Environmental Protection Agency

Discussion:

Point sources of storm water discharge are a significant source of beach closure and impairment of beneficial uses in coastal waters of the State. Control of these discharges is under the jurisdiction of the State and Regional Water Boards' storm water program.

Some commenters included positions which urged the Board to rely on current statewide permits to address storm water and related runoff as a "point source" subject to the NPDES permit program and oppose the interpretation of the Ocean Plan's prohibition on discharges to ASBS/SWQPAs as now applicable to storm water runoff. In addition, some within the regulated community felt that the Ocean Plan should not be applied to storm water discharges for the same reason that the State Implementation Plan for toxic pollutants (SIP) does not apply to stormwater discharges, because it would be a further step in the piecemeal development of policy that is in need of clarity. Some commenters have stated that a statewide storm water policy should supersede the Ocean Plan in terms of setting standards for storm water discharges. Members of the environmental community recognize the dangers posed by storm water constituents and felt strongly that these discharges should be rigorously controlled in any area and be prohibited in an ASBS. Others recommended a compliance schedule allowing dischargers time to comply with the Ocean Plan limits.

Staff generally sees the need to have both the Ocean Plan and any statewide policy be in harmony with the other. To further this collaboration the Ocean Standards Unit was recently incorporated into the Storm Water Section. However, staff has concluded that there is not sufficient information (on a statewide basis) to determine whether existing storm water control programs are adequate to ensure compliance with Ocean Plan water quality standards.

The prohibition on discharges into an ASBS/SWQPA has been in existence for more than two decades, and storm water discharges into an ASBS without both an exception and a permit are in violation of the Ocean Plan. The State Board is now addressing this situation by requiring dischargers either to apply for an exception or to cease the discharge. In addition, the six coastal Regional Water Boards have begun to focus on regulating both point and non-point discharges into ASBSs. This change has raised concern in the regulated community regarding the methods and costs of achieving compliance, especially with regard to wet-weather discharges. The environmental community is also actively involved and does not want to see a weakening of the prohibition.

Alternative(s) for Staff Action:

Minimum Effort

Monitor progress of the current State and Regional Water Boards' storm water program and permits. Ocean Unit staff will interact with other units within the Storm Water Section to ensure consistency between the Ocean Plan and the developing storm water policies.

Estimated Staff Effort: 0.1 PY

Baseline Effort

In addition to the Minimum Effort, staff will focus its efforts on evaluating storm water impacts in ASBS and in addressing these impacts through proposing exceptions to the Ocean Plan that would protect beneficial uses. Staff will also consider potential amendments to the monitoring provisions of the Ocean Plan to address storm water discharges. Contract funds should be directed at evaluating the status of beneficial uses in ASBS receiving permitted storm water and nonpoint source runoff.

Estimated Staff Effort: 0.4 PY

Estimated Contract Commitment: \$100,000

Augmented Budget Effort

In addition to the Baseline Effort, the staff would broaden its efforts to address all storm water discharges to near coastal waters.

Estimated Staff Effort: 1.0 PY per year over a three-year period

Estimated Contract Commitment: \$200,000

Staff Recommendation:

Baseline effort

Recommended Priority:

High.

Issue 18: Nonpoint Source Control.

Raised By:

Coalition for Practical Regulation (CPR)

Discussion:

Should the California Ocean Plan include a specific implementation program for the control of nonpoint sources of pollution? The Ocean Plan, Introduction, Section C.1. states: "...Nonpoint sources of waste discharges to the ocean are subject to Chapter I Beneficial Uses, Chapter II - Water Quality Objectives (wherein compliance with water quality objectives shall, in all cases, be determined by direct measurements in the receiving waters) and Chapter III - Program of Implementation Parts A.2, D, E, and H.." Ocean Plan water quality standards are undoubtedly applicable to NPS discharges to near coastal ocean receiving waters. In terms of Program of Implementation, Section III.A.2 provides general requirements for management of waste discharge to the ocean, Section III.D contains provisions for bacterial assessment and remedial action requirements, Section III.E contains implementation provisions for ASBS, and Section III.H provides discharge prohibition. It should be noted that all waste discharges to ASBS, including NPS, are prohibited unless an exception is granted. In its final report to the State Water Board (July 2003) the Southern California Coastal Water Research Project identified 224 nonpoint sources either draining in or adjacent to ASBS statewide. In addition 1016 small storm drains were identified draining to ASBS, most of which drained individual residences.

In September 2004, the State Water Board approved its *Policy For Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Policy). According to the NPS Policy, NPS control programs will be implemented through the issuance of WDRs, a waiver of WDRs for individual discharges or a category of NPS discharges, or prohibitions in orders or Basin Plan amendments that address nonpoint pollution sources. The State Water Board and the California Coastal Commission's *Plan for California's Nonpoint Source Pollution Control Program* (CCC 2000) identifies pollutant source categories and applicable management measures. The State is committed to implementing these management measures by 2013.

Reference to storm water runoff and NPS pollution are commonly intertwined. Comments included the request for a comprehensive storm water policy which would also be relative to nonpoint source runoff. Comments also requested that storm water policy and permits form the basis for regulatory control of nonpoint source runoff, including discharges into ASBS/SWQPAs.

Alternative(s) for Staff Action:

Minimum Effort

Estimated Staff Effort: 0 PY

Baseline Effort:

Staff will focus its efforts on evaluating nonpoint source and individual storm drains into ASBS and addressing these impacts through proposing exceptions to the Ocean Plan to protect beneficial uses. Staff will also consider potential amendments to the monitoring provisions of the Ocean Plan to address nonpoint source discharges, linked to Issues 14 and 15.

Estimated Staff Effort: 0.1 PY

Augmented Budget Effort

In addition to the Baseline Effort, the staff would broaden its efforts to address all nonpoint source discharges to coastal ocean waters.

Estimated Staff Effort: 0.5 PY

Staff Recommendation:

Baseline effort

Recommended Priority: High

Issue 19: Expression of Metals in Ocean Plan.

Raised By:

Regional Water Quality Control Board - Central Coast,

Discussion:

The commenter stated that the 2001 Ocean Plan does not explicitly specify whether metal concentrations in Tables B, C and D apply as the “total” recoverable metal or as the “dissolved” metal fraction. However, historical State Water Board staff documents provide an implicit understanding that all metal objectives in the Ocean Plan are to be expressed as the total recoverable concentration.

Alternative(s) for Staff Action:

Minimum Effort

No effort.

Estimated Staff Effort: 0 PY

Baseline Effort

The Ocean Plan should be amended to state that: “unless otherwise specified, all metal concentrations are expressed as the total recoverable concentration.”

Estimated Staff Effort: 0.1 PY

Staff Recommendation:

Baseline Effort.

Recommended Priority:

High

Issue 20: Natural Light WQ Objective.

Raised By:

Southern California Edison,

Discussion:

Section II.C.3 in the 2001 Ocean Plan, Physical Characteristics, contains the narrative objective: “Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.” One commenter requested that staff provide additional guidance, not currently in the Ocean Plan, to describe where and over what time period light should be measured in order to meet the objective.

Staff believes the Ocean Plan’s current objective and supporting definitions are adequate and do not need amending. However guidance for discharger self-monitoring programs with regard to measuring light would be a possible improvement.

Alternative(s) for Staff Action:

Minimum Effort

Staff work on this issue should be focused on considering amendments to the Ocean Plan’s monitoring requirements to incorporate guidelines for measuring natural light, through the stakeholder process already initiated (see Issue 15, Monitoring).

Estimated Staff Effort: 0.1 PY

Baseline Effort

In addition to the minimum effort listed above, contract with the University of California, California State University, or the Southern California Coastal Water Research Project for a literature search to evaluate different alternative methods of evaluating natural light in association with marine discharges.

Estimated Staff Effort: 0.2 PY

Estimated Contract Commitment: \$50,000.

Augmented Budget Effort

In addition to the baseline effort listed above, contract with the University of California, California State University, or the Southern California Coastal Water Research Project to perform field evaluations of different alternative methods of evaluating natural light in association with discharges.

Estimated Staff Effort: 0.3 PY

Estimated Contract Commitment: \$100,000.

Staff Recommendation:

Minimum Effort

Recommended Priority:

Medium.

Issue 21: Mixing Zones and Dilution.

Raised By:

Calleguas Municipal Water District,
San Francisco Public Utilities Commission,
United States Environmental Protection Agency

Discussion:

The Ocean Plan contains specific criteria for calculating minimum initial dilution for turbulent submerged buoyant plumes. The dilution of the plume as it mixes with the receiving water is dependent upon the flow rate, the outfall specifications such as port diameter orientation and number, effluent density and receiving water characteristics including density profile and depth. This information can be inputted into a computer model such as USEPA's UM3 embedded in the Visual Plumes platform that calculates the dilution as the plumes rises. For deep submerged plumes, mixing is considered complete when the plume ceases to rise vertically and begins spreading horizontally. This approach relies on the momentum of the plume to cause turbulent mixing with the receiving water. Once the plumes reaches maximum height and begins spreading laterally, turbulent mixing decreases rapidly. Due to the ever-changing receiving water characteristics, the Ocean Plan relies on conservative assumptions to ensure that beneficial uses are protected. The two limiting assumptions are: (1) that the lowest average monthly trapping level is used to calculate minimum initial dilution, and (2) that no currents are influencing the plume mixing as it exits the outfall and rises toward the surface.

The present language first appeared in the 1978 Ocean Plan. The only major amendment to this dilution and mixing zone policy was recognition of an acute regulatory mixing zone in 2001. Previously the Ocean Plan included a required technology based acute toxicity effluent limit where compliance was determined at end-of-pipe. The USEPA recommended that toxicity testing guidance be developed that would cover the use of mixing zones, among other things. The San Francisco Public Utilities Commission, and Calleguas Municipal Water District commented in 2004 that the current requirements where overly conservative, outdated and recommended that the State Water Board revise the Ocean Plan mixing zone language.

Alternative(s) for Staff Action:

Minimum Effort

Maintain the current approach for specifying mixing zones and dilution factors for NPDES permits. No effort.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff would evaluate currently available technologies and approaches for assessing mixing under a variety of conditions. This would also include an assessment of other coastal state policies.

Estimated Staff Effort: 0.2 PY per year over a three-year period

Estimated Contract Commitment: \$100,000

Augmented Budget Effort

In addition to the work listed above, staff would contract with a research organization or university with a reputation in plume dynamics to evaluate alternatives for mixing zone analysis.

Estimated Staff Effort: 1.0 PY (over a three year period)

Estimated Contract Commitment: \$700,000.

Staff Recommendation:

Minimum Effort

Recommended Priority:

Low.

Issue 22: Suspended Solids Regulation in Table A.

Raised By:

Regional Water Quality Control Board - Central Coast,
United States Environmental Protection Agency

Discussion:

The Central Coast Regional Water Quality Control Board suggested that the suspended solids effluent limitation in Table A should be amended to be consistent with the USEPA promulgated minimum level of suspended solids effluent quality attainable by secondary treatment in 40 CFR 133.102. USEPA echoed the fact that any effluent limitation for total suspended solids in any NPDES permit must be as stringent as total suspended solids effluent limitations that have been adopted under the Clean Water Act.

Alternative(s) for Staff Action:

Minimum Effort

Make no change in the Table A suspended solids limitation.

Estimated Staff Effort: 0 PY

Baseline Effort

Modify the Table A suspended solids effluent limitation to be consistent with 40 CFR 133.102.

Estimated Staff Effort: 0.2 PY

Augmented Budget Effort

Evaluate suspended solids removal efficiency for ocean dischargers and derive a new suspended solids effluent limitation for Table A.

Estimated Staff Effort: 0.5 PY

Staff Recommendation:

Baseline Effort

Recommended Priority:

High.

Issue 23: Plastic Debris Regulation.

Raised By:

Algalita Marine Research Foundation,

Discussion:

The Ocean Plan has water quality objectives in Table B for specific phthalate compounds that may be used as additives to plastic products. The Ocean Plan also has narrative objectives for floating particulates (“...shall not be visible.”) and on inert solids (“...sediments shall not be changed such that benthic communities are degraded.”) with corresponding implementation provisions. The general provisions of the Water Quality Objectives of the Ocean Plan “sets forth limits or levels of water quality characteristics for ocean waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance.” However these water quality objectives do not specifically address plastic particulates or other trash. These existing provisions while being general in their application may have originally been designed with waste water treatment plant discharges in mind.

The Los Angeles Region’s Basin Plan has an objective that has been applied to trash, including plastic debris, from storm water systems: “Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.”

The environmental community has expressed concerns with not only the physical debris of pre- and post-consumer plastics, but with related constituents and their effect on the marine environment. There are estimates that approximately sixty to eighty percent of marine debris in the world’s oceans emanates from land-based sources. Some forms of plastic debris are ingested by marine life and other forms of debris are known to cause entanglement. Plastics in the marine environment may concentrate persistent hydrophobic pollutants and may have the potential to transport them throughout the marine food web. It is common for runoff from the plastics manufacturing industry to discharge through storm drains, and plastic pellets, powders, and manufacturing residuals have been known to be discharged. That the Ocean Plan does not now specifically address plastic debris, and other trash, is an oversight that needs correction.

Alternative(s) for Staff Action:

Minimum Effort

No action, rely on existing Ocean Plan and Basin Plan provisions.

Estimated Staff Effort: 0 PY

Baseline Effort

Review existing state and federal law, permits, regulations and guidelines related to trash, including pre- and post-consumer plastic debris. Further define those parts of the Ocean Plan that are applicable to the control of trash/plastic, and determine if additional provisions are desirable to protect beneficial uses of state ocean waters. If additional provisions are necessary then prepare proposed amendments to the Ocean Plan.

Estimated Staff Effort: 0.2 PY

Augmented Budget Effort

In addition to the above, contract out for an evaluation of the magnitude of the presence of trash in near coastal waters and beaches statewide, and to determine the status of beneficial uses in relation to such debris.

Estimated Staff Effort: 0.5 PY

Estimated Contract Commitment: \$500,000

Staff Recommendation:

Baseline effort

Recommended Priority:

High

Issue 24: Acute Toxicity Definition

Raised By:

State Water Board Staff

Discussion:

Since the last Triennial Review, staff has received verbal comments about the need to revise the definition of acute toxicity in Appendix I. Two problems arise from the equation found in the acute toxicity definition, $TU_a = \log(100-S)/1.7$. First, the equation does not account for mortality in the control concentration. Most acute toxicity protocols allow all toxicity responses to be adjusted for control mortality. High control mortality will invalidate the toxicity test. Second, the equation produces a zero value when survival in undiluted effluent is greater than 99%. This zero value creates computation problems when performing a reasonable potential assessment using the newly promulgated procedures in Appendix VI.

Alternative(s) for Staff Action:

Minimum Effort

Make no changes to the Appendix I acute toxicity definition.

Estimated Staff Effort: 0 PY

Baseline Effort

Revise the equation in the acute toxicity definition to account for control mortality and to produce a value greater than zero when survival in undiluted effluent is greater than 99%.

Estimated Staff Effort: 0.1 PY

Staff Recommendation:

Baseline Effort.

Recommended Priority:

High.

Issue 25: Non-substantive Administrative Changes

Raised By:

State Water Board Staff

Discussion:

The Ocean Plan has evolved considerably over time addressing many important and substantive issues. However, the overall format and certain non-substantive features need to be improved. For one example, the addition of a map(s) of the coastline identifying ocean waters and enclosed bays that compliments the existing definitions and applicability of the Ocean Plan would be an improvement, especially for the users of the Plan.

Alternative(s) for Staff Action:

Minimum Effort

No effort.

Estimated Staff Effort: 0 PY

Baseline Effort

Staff would develop and propose non-substantive changes to the Ocean Plan.

Estimated Staff Effort: 0.2 PY

Staff Recommendation:

Baseline Effort

Recommended Priority:

Medium.

Staff Recommendation for Issue Priority

Table 3. Recommended Priority for each Issue.

Priority	2005-2008 Workplan Issue Number	Issue
High	2.	Proposed Amendment 2, Fecal Coliform Standard for Shellfish
High	6.	Control of Ballast Water Discharges and Invasive Species
High	13.	Review Table B Chemical WQ Objectives
High	14.	Regional Ambient WQ Monitoring
High	15.	Standard Monitoring & Reporting Requirements
High	17.	Control of Stormwater Discharges
High	18.	Nonpoint Source Control
High	19.	Expression of Metals in Ocean Plan
High	22.	Suspended Solids Regulation in Table A
High	23.	Plastic Debris Regulation
High	24.	Acute Toxicity Definition
Medium	5.	Mass Emission Regulation
Medium	8.	Review of WQ Objectives for Dioxins and Related Compounds
Medium	9.	Biological Objectives
Medium	10.	Desalination Facilities and Brine Disposal
Medium	25.	Nonsubstantive Changes
Low	7.	Revision of Beneficial Uses
Low	11.	Sediment Quality Objectives
Low	12.	Site Specific Objectives
Low	16.	TRE and TIE Implementation
Low	20.	Natural Light WQ Objective
Low	21.	Mixing Zones and Dilution
Completed	1.	Proposed Amendment 1, Add <i>Enterococcus</i> and Revise Fecal Water Contact Standard
Completed	3.	Proposed Amendment 3, SWQPA
Completed	4.	Proposed Amendment 4, Reasonable Potential

Workplan Personnel Resource Commitments

Table 4. Ocean Standards Unit Workload Allocation

2005-2008 Workplan Issue Number	Issue	PYs Recommended per issue
1.	Amendment, Add <i>Enterococcus</i> and Revise Fecal Water Contact Standard	0
2.	Proposed Amendment, Fecal Coliform Standard for Shellfish	0.5
3.	Modified Amendment 3, ASBS/SWQPA	0
4.	Amendment, Reasonable Potential	0
5.	Mass Emission Regulation	0
6.	Control of Ballast Water Discharges and Invasive Species	0.25
7.	Revision of Beneficial Uses	0
8.	Review of WQ Objectives for Dioxins and Related Compounds	0.1
9.	Biological Objectives	0.1
10.	Desalination Facilities and Brine Disposal	0.1
11.	Sediment Quality Objectives	0
12.	Site Specific Objectives	0
13.	Review Table B Chemical WQ Objectives	0.55
14.	Regional Ambient WQ Monitoring	0.1
15.	Standard Monitoring & Reporting Requirements	0.4
16.	TRE and TIE Implementation	0
17.	Control of Stormwater Discharges	0.4
18.	Nonpoint Source Control	0.1
19.	Expression of Metals in Ocean Plan	0.1
20.	Natural Light WQ Objective	0.1
21.	Mixing Zones and Dilution	0
22.	Suspended Solids Regulation	0.2
23.	Plastic Debris and Trash Regulation	0.2
24.	Acute Toxicity Definition	0.1
25.	Non-substantive Administrative Changes	0.2
	<i>subtotal</i>	3.5
	Other Ocean Unit assignments	
	Sediment Quality Objectives, Buys and Estuaries	0.8
	Ocean Plan Exceptions, ASBS	0.7
	<i>subtotal</i>	1.5
	<i>total</i>	5

List of Acronyms

ASBS	Areas of Special Biological Significance
BRI	Benthic Response Index
Cal/EPA	California Environmental Protection Agency
CASA	California Association of Sanitation Agencies
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CFR	Federal Code of Regulations
CPR	Coalition for Practical Regulation
CWA	Federal Clean Water Act
CWC	California Water Code
DFG	California Department of Fish and Game
DHS	California Department of Health Services
MLOE	Multiple Line of Evidence
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint Source
OEHHA	California Office of Environmental Health Hazards Assessment
POTW	Publicly Owned Treatment Works
PRC	California Public Resources Code
PY	Personnel Years
RWQCB	Regional Water Quality Control Board
SCAP	Southern California Alliance of Publicly-Owned Treatment Works
SCCWRP	Southern California Coastal Water Research Project
SFEI	San Francisco Estuary Institute
SIP	State Water Board Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries
SQO	Sediment Quality Objective
SWQPA	State Water Quality Protection Area
SWRCB	State Water Resources Control Board, State Water Board
TCDD	Tetrachlorodibenzo-dioxins
TIE	Toxicity Identification Evaluation
TRE	Toxicity Reduction Evaluation
TUa	Toxicity Unit Acute
U.S.EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirement
WQ	Water Quality
WQO	Water Quality Objective
WSPA	Western States Petroleum Association