

California Ocean Plan Amendments

ISSUE 1, REASONABLE POTENTIAL

Presented below are the changes to the 2001 California Ocean Plan as a result of the Board's approval on April 21, 2005.

- 1. Chapter III, G. Monitoring Program, 2, page 21, add reference to appendix VI to subsection 1, delete subsection 2 and renumber subsection 3.**

G. Monitoring Program

1. The Regional Water Boards shall require dischargers to conduct self-monitoring programs and submit reports necessary to determine compliance with the waste* discharge requirements, and may require dischargers to contract with agencies or persons acceptable to the Regional Water Board to provide monitoring reports. Monitoring provisions contained in waste discharge requirements shall be in accordance with the Monitoring Procedures provided in Appendices III and VI.
 2. The Regional Water Board may require monitoring of bioaccumulation of toxicants in the discharge zone. Organisms and techniques for such monitoring shall be chosen by the Regional Water Board on the basis of demonstrated value in waste* discharge monitoring.
- 2. Chapter III, C. Implementation Provisions for Table B, page 12, add new subsection 2 on reasonable potential and renumber subsequent subsections.**

C. Implementation Provisions for Table B

2. If the Regional Water Board determines, using the procedures in Appendix VI, that a pollutant is discharged into Ocean Waters at levels which will cause, have the reasonable potential to cause, or contribute to an excursion above a Table B water quality objective, the Regional Water Board shall incorporate a water quality-based effluent limitation in the Waste Discharge Requirement for the discharge of that pollutant.
3. Effluent limitations shall be imposed in a manner prescribed by the State Water Board such that the concentrations set forth below as water quality objectives shall not be exceeded in the receiving water upon completion of initial* dilution, except that objectives indicated for radioactivity shall apply directly to the undiluted waste* effluent.
4. Calculation of Effluent Limitations

5. Minimum* Levels
6. Use of Minimum* Levels
7. Sample Reporting Protocols
8. Compliance Determination
9. Pollutant Minimization Program
10. Toxicity Reduction Requirements

3. Add Appendix VI to the California Ocean Plan to provide RPA procedures

Appendix VI

Reasonable Potential Analysis Procedure for determining which Table B Objectives require effluent limitations

In determining the need for an effluent limitation, the Regional Water Board shall use all representative information to characterize the pollutant discharge using a scientifically defensible statistical method that accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and (unless otherwise demonstrated) assumes a lognormal distribution of the facility-specific effluent data.

The purpose of the following procedure (see also Figure VI-1) is to provide direction to the Regional Water Boards for determining if a pollutant discharge causes, has the reasonable potential to cause, or contributes to an excursion above Table B water quality objectives in accordance with 40 CFR 122.44 (d)(1)(iii). The Regional Water Board may use an alternative approach for assessing reasonable potential such as an appropriate stochastic dilution model that incorporates both ambient and effluent variability. The permit fact sheet or statement of basis will document the justification or basis for the conclusions of the reasonable potential assessment. This appendix does not apply to permits or any portion of a permit where the discharge is regulated through best management practices (BMP) unless such discharge is also subject to numeric effluent limitations.

Step 1: Identify C_o , the applicable water quality objective from Table B for the pollutant.

Step 2: Does information about the receiving water body or the discharge support a reasonable potential assessment (RPA) without characterizing facility-specific effluent monitoring data? If yes, go to *Step 13* to conduct an RPA based on best professional judgment (BPJ). Otherwise, proceed to *Step 3*.

Step 3: Is facility-specific effluent monitoring data available? If yes, proceed to *Step 4*. Otherwise, go to *Step 13*.

Step 4: Adjust all effluent monitoring data C_e , including censored (ND or DNQ) values to the concentration X expected after complete mixing. For Table B pollutants use $X = (C_e + D_m C_s) / (D_m + 1)$; for acute toxicity use $X = C_e / (0.1 D_m + 1)$; where D_m is the minimum probable initial dilution expressed as parts seawater per part wastewater and C_s is the background seawater concentration from Table C. For ND values, C_e is replaced with “<MDL;” for DNQ values C_e is replaced with “<ML.” Go to *Step 5*.

Step 5: Count the total number of samples n , the number of censored (ND or DNQ) values, c and the number of detected values, d , such that $n = c + d$.

Is any *detected* pollutant concentration after complete mixing greater than C_o ? If yes, the discharge causes an excursion of C_o ; go to *Endpoint 1*. Otherwise, proceed to *Step 6*.

Step 6: Does the effluent monitoring data contain three or more detected observations ($d \geq 3$)? If yes, proceed to *Step 7* to conduct a parametric RPA. Otherwise, go to *Step 11* to conduct a nonparametric RPA.

Step 7: Conduct a parametric RPA. Assume data are lognormally distributed, unless otherwise demonstrated. Does the data consist entirely of detected values ($c/n = 0$)? If yes,

- calculate summary statistics M_L and S_L , the mean and standard deviation of the natural logarithm transformed effluent data expected after complete mixing, $\ln(X)$,
- go to *Step 9*.

Otherwise, proceed to *Step 8*.

Step 8: Is the data censored by 80% or less ($c/n \leq 0.8$)? If yes,

- calculate summary statistics M_L and S_L using the censored data analysis method of Helsel and Cohn (1988),
- go to *Step 9*.

Otherwise, go to *Step 11*.

Step 9: Calculate the UCB i.e., the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. For lognormal distributions, use $UCBL_{(.95,.95)} = \exp(M_L + S_L g'_{(.95,.95,n)})$, where g' is a normal tolerance factor obtained from the table below (Table VI-1). Proceed to *Step 10*.

Step 10: Is the UCB greater than C_o ? If yes, the discharge has a reasonable potential to cause an excursion of C_o ; go to *Endpoint 1*. Otherwise, the discharge has no reasonable potential to cause an excursion of C_o ; go to *Endpoint 2*.

Step 11: Conduct a non-parametric RPA. Compare each data value X to C_o . Reduce the sample size n by 1 for each tie (i.e., inconclusive censored value result) present. An adjusted ND value having $C_o < MDL$ is a tie. An adjusted DNQ value having $C_o < ML$ is also a tie.

Step 12: Is the adjusted $n > 15$? If yes, the discharge has no reasonable potential to cause an excursion of C_o ; go to *Endpoint 2*. Otherwise, go to *Endpoint 3*.

Step 13: Conduct an RPA based on BPJ. Review all available information to determine if a water quality-based effluent limitation is required, notwithstanding the above analysis in *Steps 1* through *12*, to protect beneficial uses. Information that may be used includes: the facility type, the discharge type, solids loading analysis, lack of dilution, history of compliance problems, potential toxic impact of discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, the presence of endangered or threatened species or critical habitat, and other information.

Is data or other information unavailable or insufficient to determine if a water quality-based effluent limitation is required? If yes, go to *Endpoint 3*. Otherwise, go to either *Endpoint 1* or *Endpoint 2* based on BPJ.

Endpoint 1: An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in Appendix III, is required.

Endpoint 2: An effluent limitation is not required for the pollutant. Appendix III effluent monitoring is not required for the pollutant; the Regional Board, however, may require occasional monitoring for the pollutant or for whole effluent toxicity as appropriate.

Endpoint 3: The RPA is inconclusive. Monitoring for the pollutant or whole effluent toxicity testing, consistent with the monitoring frequency in Appendix III, is required. An existing effluent limitation for the pollutant shall remain in the permit, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if the monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a Table B water quality objective.

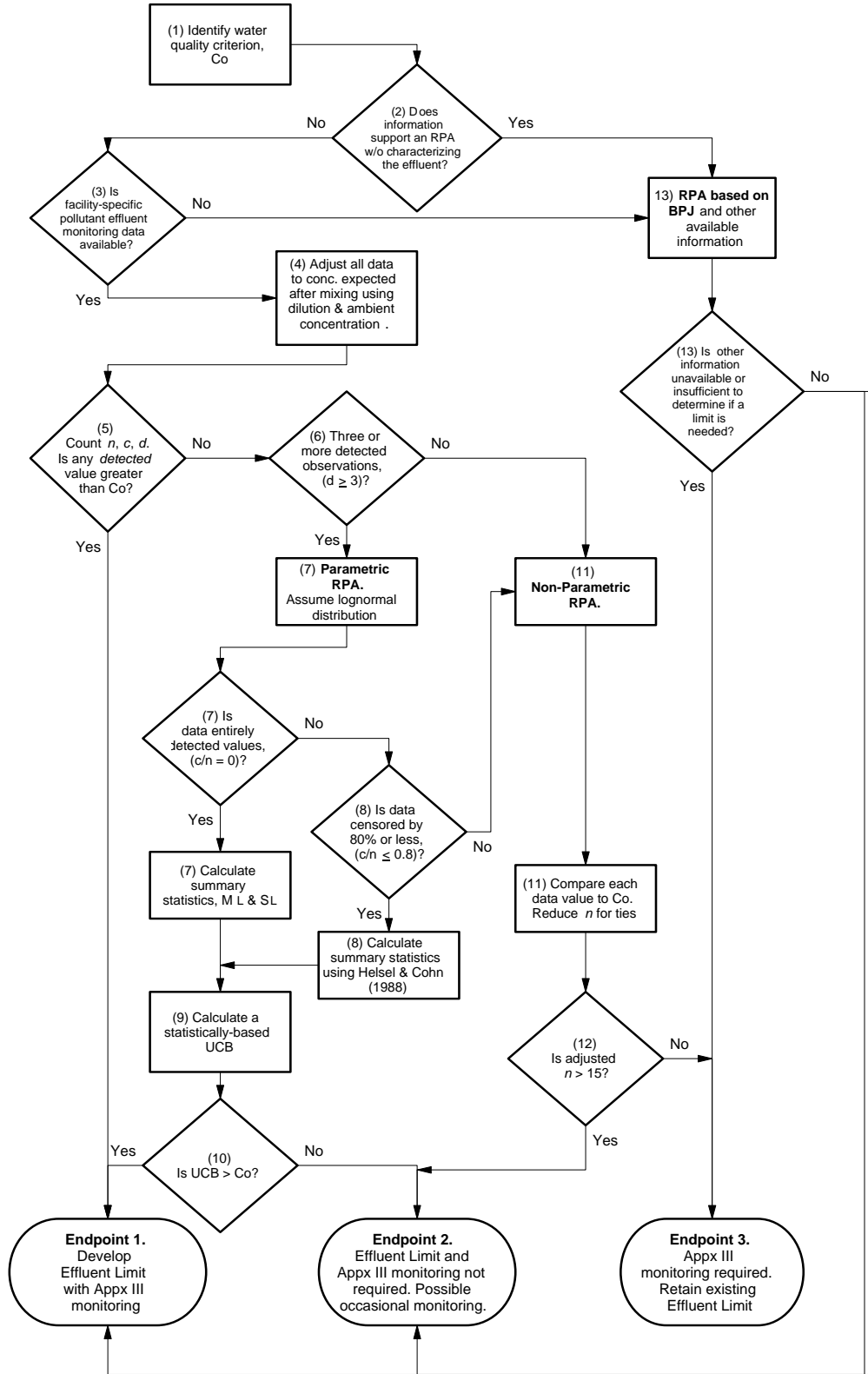
Appendix VI References:

- Helsel D. R. and T. A. Cohn. 1988. Estimation of descriptive statistics for multiply censored water quality data. *Water Resources Research*, Vol 24(12):1977-2004.
- Hahn J. H. and W. Q. Meeker. 1991. *Statistical Intervals, A guide for practitioners*. J. Wiley & Sons, NY.

Table VI-1: Tolerance factors $g'_{(.95,.95,n)}$ for calculating normal distribution one-sided upper 95 percent tolerance bounds for the 95th percentile (Hahn & Meeker 1991)

n	$g'_{(.95,.95,n)}$	n	$g'_{(.95,.95,n)}$
2	26.260	21	2.371
3	7.656	22	2.349
4	5.144	23	2.328
5	4.203	24	2.309
6	3.708	25	2.292
7	3.399	26	2.275
8	3.187	27	2.260
9	3.031	28	2.246
10	2.911	29	2.232
11	2.815	30	2.220
12	2.736	35	2.167
13	2.671	40	2.125
14	2.614	50	2.065
15	2.566	60	2.022
16	2.524	120	1.899
17	2.486	240	1.819
18	2.453	480	1.766
19	2.423	∞	1.645
20	2.396		

Figure VI-1: Reasonable potential analysis flow chart



ISSUE 2, AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE AND EXCEPTIONS

Presented below are the changes to the 2001 California Ocean Plan as a result of the Board's approval on April 21, 2005.

1. Chapter III, I. State Board Exceptions to Plan Requirements, page 22, add new subsection 2 on Triennial Review of all exceptions.

I. State Water Board Exceptions to Plan Requirements

1. The State Water Board may, in compliance with the California Environmental Quality Act, subsequent to a public hearing, and with the concurrence of the Environmental Protection Agency, grant exceptions where the State Water Board determines:
 - a. The exception will not compromise protection of ocean* waters for beneficial uses, and,
 - b. The public interest will be served.
2. All exceptions issued by the State Water Board and in effect at the time of the Triennial Review will be reviewed at that time. If there is sufficient cause to re-open or revoke any exception, the State Water Board may direct staff to prepare a report and to schedule a public hearing. If after the public hearing the State Water Board decides to re-open, revoke, or re-issue a particular exception, it may do so at that time.

2. Appendix I, Definition of Terms, pages 23 through 26, modify the definition for "Areas of Special Biological Significance" and add a definition for the term "State Water Quality Protection Areas."

AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE* WATER QUALITY PROTECTION AREAS.

STATE WATER QUALITY PROTECTION AREAS (SWQPAs) are nonterrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All Areas of Special Biological Significance (ASBS) that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by this Plan.

3. **Appendix V, Areas* of Special Biological Significance, pages 38 and 39, modify Table V-1 to incorporate the classification of ASBS as a subset of SWQPAs and to modify the names of specific ASBS.**

APPENDIX V

**STATE* WATER QUALITY PROTECTION AREAS
AREAS* OF SPECIAL BIOLOGICAL IMPORTANCE**

TABLE V-1
STATE WATER QUALITY PROTECTION AREAS
AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE
(DESIGNATED OR APPROVED BY THE STATE WATER RESOURCES CONTROL BOARD)

No.	ASBS Name	Date Designated	SWRCB Resolution No.	Region No.
1.	Jughandle Cove	March 21, 1974,	74-28	1
2.	Del Mar Landing	March 21, 1974,	74-28	1
3.	Gerstle Cove	March 21, 1974,	74-28	1
4.	Bodega	March 21, 1974,	74-28	1
5.	Saunders Reef	March 21, 1974,	74-28	1
6.	Trinidad Head	March 21, 1974,	74-28	1
7.	King Range	March 21, 1974,	74-28	1
8.	Redwood National Park	March 21, 1974,	74-28	1
9.	James V. Fitzgerald	March 21, 1974,	74-28	2
10.	Farallon Islands	March 21, 1974,	74-28	2
11.	Duxbury Reef	March 21, 1974,	74-28	2
12.	Point Reyes Headlands	March 21, 1974,	74-28	2
13.	Double Point	March 21, 1974,	74-28	2
14.	Bird Rock	March 21, 1974,	74-28	2
15.	Año Nuevo	March 21, 1974,	74-28	3
16.	Point Lobos	March 21, 1974,	74-28	3
17.	San Miguel, Santa Rosa, and Santa Cruz Islands	March 21, 1974,	74-28	3
18.	Julia Pfeiffer Burns	March 21, 1974,	74-28	3
19.	Pacific Grove	March 21, 1974,	74-28	3
20.	Salmon Creek Coast	March 21, 1974,	74-28	3
21.	San Nicolas Island and Begg Rock	March 21, 1974,	74-28	4
22.	Santa Barbara and Anacapa Islands	March 21, 1974,	74-28	4

23.	San Clemente Island	March 21, 1974,	74-28	4
24.	Laguna Point to Latigo Point	March 21, 1974,	74-28	4
25.	Northwest Santa Catalina Island	March 21, 1974,	74-28	4
26.	Western Santa Catalina Island	March 21, 1974,	74-28	4
27.	Farnsworth Bank	March 21, 1974,	74-28	4
28.	Southeast Santa Catalina Island	March 21, 1974,	74-28	4
29.	La Jolla	March 21, 1974,	74-28	9
30.	Heisler Park	March 21, 1974,	74-28	9
31.	San Diego-Scripps	March 21, 1974,	74-28	9
32.	Robert E. Badham	April 18, 1974	74-32	8
33.	Irvine Coast	April 18, 1974	74-32	8, 9
34.	Carmel Bay	June 19, 1975	75-61	3

4. Appendix VII, Exceptions to the California Ocean Plan, add a new Appendix VII and Table VII-1 listing California Ocean Plan exceptions that are currently in effect.

APPENDIX VII

EXCEPTIONS TO THE CALIFORNIA OCEAN PLAN

TABLE VII-1
EXCEPTIONS TO THE OCEAN PLAN

(GRANTED BY THE STATE WATER RESOURCES CONTROL BOARD)

Year	Resolution	Applicable Provision	Discharger
1977	77-11	Discharge Prohibition, ASBS #23	US Navy San Clemente Island
1983	83-78	Discharge Prohibition, ASBS #7	Humboldt County Resort Improvement District No.1
1984	84-78	Discharge Prohibition, ASBS #34	Carmel Sanitary District
1990	90-105	Discharge Prohibition, ASBS #21	US Navy San Nicolas Island
2004	2004-0052	Discharge Prohibition, ASBS #31	UC Scripps Institution of Oceanography