Appendix A
Draft Ocean Plan with Format Change Only

State of California

STATE WATER RESOURCES CONTROL BOARD

~~1997~~

CALIFORNIA OCEAN PLAN

WATER QUALITY CONTROL PLAN

OCEAN WATERS OF CALIFORNIA

Adopted and Effective _____

DRAFT
Table of Contents

Proposed Amendment
of the Format of the

CALIFORNIA OCEAN PLAN

WATER QUALITY CONTROL PLAN FOR OCEAN WATERS OF CALIFORNIA

INTRODUCTION

A. In furtherance of legislative policy set forth in Section 13000 of Division 7 of the California Water Code (Stats. 1969, Chap. 482) pursuant to the authority contained in Section 13170 and 13170.2 (Stats. 1971, Chap. 1288) the State Water Resources Control Board hereby finds and declares that protection of the quality of the ocean* waters for use and enjoyment by the people of the State requires control of the discharge of waste* to ocean* waters in accordance with the provisions contained herein. The Board finds further that this plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation* to marine species or posing a threat to public health.

B. This plan is applicable, in its entirety, to point source discharges to the ocean*. Nonpoint sources of waste* discharges to the ocean* are subject to Chapter I Beneficial Uses; Chapter II - WATER QUALITY OBJECTIVES, *including Part G*, ~~Chapter III General Requirements, Chapter IV~~ *and* Table B (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* ~~V Discharge Prohibitions~~.

C. This plan is not applicable to discharges to enclosed* bays and estuaries* or inland waters nor is it applicable to vessel wastes, or the control of dredging spoil.

D. Provisions regulating the thermal aspects of waste* discharged to the ocean* are set forth in the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed* Bays and Estuaries* of California.

~~Chapter I~~

Chapter I BENEFICIAL USES

A. The beneficial uses of the ocean* waters of the State that shall be protected include industrial water supply, water contact and non-contact recreation, including aesthetic enjoyment, navigation, commercial and sport fishing, mariculture, preservation and enhancement of Areas of Special Biological Significance, rare and endangered species, marine habitat, fish migration, fish spawning and shellfish* harvesting.

*See Appendix I for definition of terms.

~~Chapter II~~

Chapter II WATER QUALITY OBJECTIVES

A. General Provisions

1. This chapter 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. The discharge of waste* shall not cause violation of these objectives.

2. The Water Quality Objectives and Effluent Limitations are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

3. Compliance with the water quality objectives of this chapter shall be determined from samples collected at stations representative of the area within the waste field where initial* dilution is completed.

B~~A~~. Bacterial Characteristics

1. Water-Contact Standards

a. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp* beds, the following bacterial objectives shall be maintained throughout the water column:

(1)~~a.~~ Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

(2)~~b.~~ The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

b. The "Initial* Dilution Zone" of wastewater outfalls shall be excluded from designation as "kelp* beds" for purposes of bacterial standards, and Regional Boards should recommend extension of such exclusion zone

*See Appendix I for definition of terms.

where warranted to the SWRCB (for consideration under Chapter *III.G.* ~~VI.F~~.). Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp* beds for purposes of bacterial standards.

2. Shellfish* Harvesting Standards

   a. At all areas where shellfish* may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

      (1) The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

C. Physical Characteristics

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste* shall not cause aesthetically undesirable discoloration of the ocean* surface.

3. Natural* light shall not be significantly* reduced at any point outside the initial* dilution zone as the result of the discharge of waste*.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean* sediments shall not be changed such that benthic communities are degraded*.

D. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste* materials.

2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly* increased above that present under natural conditions.

4. The concentration of substances set forth in Chapter *II* ~~IV~~, Table B, in marine sediments shall not be increased to levels which would degrade* indigenous biota.

*See Appendix I for definition of terms.

5. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade* marine life.

6. Nutrient materials shall not cause objectionable aquatic growths or degrade* indigenous biota.

E. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded*.

2. The natural taste, odor, and color of fish, shellfish*, or other marine resources used for human consumption shall not be altered.

3. The concentration of organic materials in fish, shellfish* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

F. Radioactivity

1. Discharge of radioactive waste* shall not degrade* marine life.

~~Chapter III~~

G. General Requirements For Management Of Waste Discharge To The Ocean*

1. ~~A.~~ 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 healthy and diverse marine community.

2. ~~B.~~ Waste discharged* to the ocean* must be essentially free of:

a. ~~1.~~ Material that is floatable or will become floatable upon discharge.

b. ~~2.~~ Settleable material or substances that may form sediments which will degrade* benthic communities or other aquatic life.

c. ~~3.~~ Substances which will accumulate to toxic levels in marine waters, sediments or biota.

d. ~~4.~~ Substances that significantly* decrease the natural* light to benthic communities and other marine life.

e. 5. Materials that result in aesthetically undesirable discoloration of the ocean* surface.

*See Appendix I for definition of terms.

3. ~~C.~~ Waste* effluents shall be discharged in a manner which provides sufficient initial* dilution to minimize the concentrations of substances not removed in the treatment.

4. ~~D.~~ Location of waste* discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

   a. ~~1.~~ Pathogenic organisms and viruses are not present in areas where shellfish* are harvested for human consumption or in areas used for swimming or other body-contact sports.

   b. ~~2.~~ Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

   c. ~~3.~~ Maximum protection is provided to the marine environment.

5. Waste* that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing* and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

~~Chapter IV~~
~~QUALITY REQUIREMENTS~~
~~FOR WASTE* DISCHARGES~~
~~(EFFLUENT LIMITATIONS)~~

~~This chapter sets forth the quality requirements for waste* discharge to the ocean*.~~

6. *Effluent Limitations*

   a. Table A effluent limitations apply only to publicly owned treatment works and industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Federal Clean Water Act.

   b. Table A effluent limitations~~, and effluent concentrations calculated from Table B water quality objectives,~~ shall apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge), except where otherwise specified in this Plan.

*See Appendix I for definition of terms.

c. The SWRCB is authorized to administer and enforce effluent limitations established pursuant to the Federal Clean Water Act. Effluent limitations established under Sections 301, 302, 306, 307, 316, 403, and 405 of the aforementioned Federal Act and administrative procedures pertaining thereto, are included in this plan by reference. Compliance with Table A effluent limitations, or Environmental Protection Agency Effluent Limitations Guidelines for industrial discharges, based on Best Practicable Control Technology, shall be the minimum level of treatment acceptable under this plan, and shall define reasonable treatment and waste control technology.

TABLE A
EFFLUENT LIMITATIONS

	Unit of Measurement	Limiting Concentrations: Monthly (30-day Average)	Limiting Concentrations: Weekly (7-day Average)	Limiting Concentrations: Maximum at any time
Grease and Oil	mg/l	25	40	75
Suspended Solids			see below+	
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	units		within limits of 6.0 to 9.0 at all times	
Acute* Toxicity	TUa	1.5	2.0	2.5

+Suspended Solids: Dischargers shall, as a 30-day average, remove 75% of suspended solids from the influent stream before discharging wastewaters to the ocean*, except that the effluent limitation to be met shall not be lower than 60 mg/l. Regional Boards may recommend that the SWRCB (Chapter *III.G* ~~VI.F~~.), with the concurrence of the Environmental Protection Agency, adjust the lower effluent concentration limit (the 60 mg/l above) to suit the environmental and effluent characteristics of the discharge. As a further consideration in making such recommendation for adjustment, Regional Boards should evaluate effects on existing and potential water* reclamation projects.

If the lower effluent concentration limit is adjusted, the discharger shall remove 75% of suspended solids from the influent stream at any time the influent concentration exceeds four times such adjusted effluent limit.

Effluent limitations shall be imposed in a manner prescribed by the SWRCB 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.

*See Appendix I for definition of terms.

7. *Numerical Water Quality Objectives*

a. Table B water quality objectives apply to all discharges within the jurisdiction of this plan.

b. ~~Table A effluent limitations and~~ Effluent concentrations calculated from Table B water quality objectives shall apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge), except where otherwise specified in this Plan.

*See Appendix I for definition of terms.

TABLE B
WATER QUALITY OBJECTIVES

	Units of Measurement	Limiting Concentrations 6-Month Median	Daily Maximum	Instantaneous Maximum	
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic	mg/l		8	32	80
Cadmium	mg/l	1	4	10	
Chromium (Hexavalent) (see below, a)	mg/l	2	8	20	
Copper	mg/l	3	12	30	
Lead	mg/l	2	8	20	
Mercury	mg/l	0.04		0.16	0.4
Nickel	mg/l	5	20	50	
Selenium	mg/l	15	60	150	
Silver	mg/l	0.7	2.8	7	
Zinc	mg/l	20	80	200	
Cyanide (see below, b)	mg/l	1	4	10	
Total Chlorine Residual (For intermittent chlorine sources, see below, c)	mg/l		2	8	60
Ammonia (expressed as nitrogen)	mg/l	600	2400	6000	
Chronic* Toxicity	TUc		1		
Phenolic Compounds (non-chlorinated)	mg/l	30	120	300	
Chlorinated Phenolics	mg/l	1	4	10	
Endosulfan	mg/l	0.009	0.018	0.027	
Endrin	mg/l	0.002	0.004	0.006	
HCH*	mg/l	0.004	0.008	0.012	
Radioactivity**					

**Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.

*See Appendix I for definition of terms.

Table B Continued

Chemical	30-day Average (mg/l) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS		
acrolein	220	2.2×10^{2}
antimony	1,200	1.2×10^{3}
bis(2-chloroethoxy) methane	4.4	4.4×10^{0}
bis(2-chloroisopropyl) ether	1,200	1.2×10^{3}
chlorobenzene	570	5.7×10^{2}
chromium (III)	190,000	1.9×10^{5}
di-n-butyl phthalate	3,500	3.5×10^{3}
dichlorobenzenes*	5,100	5.1×10^{3}
1,1-dichloroethylene	7,100	7.1×10^{3}
diethyl phthalate	33,000	3.3×10^{4}
dimethyl phthalate	820,000	8.2×10^{5}
4,6-dinitro-2-methylphenol	220	2.2×10^{2}
2,4-dinitrophenol	4.0	4.0×10^{0}
ethylbenzene	4,100	4.1×10^{3}
fluoranthene	15	1.5×10^{1}
hexachlorocyclopentadiene	58	5.8×10^{1}
isophorone	150,000	1.5×10^{5}
nitrobenzene	4.9	4.9×10^{0}
thallium	14	1.4×10^{1}
toluene	85,000	8.5×10^{4}
1,1,2,2-tetrachloroethane	1,200	1.2×10^{3}
tributyltin	0.0014	1.4×10^{-3}
1,1,1-trichloroethane	540,000	5.4×10^{5}
1,1,2-trichloroethane	43,000	4.3×10^{4}
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS		
acrylonitrile	0.10	1.0×10^{-1}
aldrin	0.000022	2.2×10^{-5}
benzene	5.9	5.9×10^{0}
benzidine	0.000069	6.9×10^{-5}
beryllium	0.033	3.3×10^{-2}
bis(2-chloroethyl) ether	0.045	4.5×10^{-2}
bis(2-ethylhexyl) phthalate	3.5	3.5×10^{0}
carbon tetrachloride	0.90	9.0×10^{-1}
chlordane*	0.000023	2.3×10^{-5}
chloroform	130	1.3×10^{2}
DDT*	0.00017	1.7×10^{-4}
1,4-dichlorobenzene	18	1.8×10^{1}
3,3'-dichlorobenzidine	0.0081	8.1×10^{-3}
1,2-dichloroethane	130	1.3×10^{2}

*See Appendix I for definition of terms.

Table B Continued

Chemical	30-day Average (mg/l) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS		
dichloromethane	450	4.5×10^{2}
1,3-dichloropropene	8.9	8.9×10^{0}
dieldrin	0.00004	4.0×10^{-5}
2,4-dinitrotoluene	2.6	2.6×10^{0}
1,2-diphenylhydrazine	0.16	1.6×10^{-1}
halomethanes*	130	1.3×10^{2}
heptachlor*	0.00072	7.2×10^{-4}
hexachlorobenzene	0.00021	2.1×10^{-4}
hexachlorobutadiene	14	1.4×10^{1}
hexachloroethane	2.5	2.5×10^{0}
N-nitrosodimethylamine	7.3	7.3×10^{0}
N-nitrosodiphenylamine	2.5	2.5×10^{0}
PAHs*	0.0088	8.8×10^{-3}
PCBs*	0.000019	1.9×10^{-5}
TCDD equivalents*	0.0000000039	3.9×10^{-9}
tetrachloroethylene	99	9.9×10^{1}
toxaphene	0.00021	2.1×10^{-4}
trichloroethylene	27	2.7×10^{1}
2,4,6-trichlorophenol	0.29	2.9×10^{-1}
vinyl chloride	36	3.6×10^{1}

a) Dischargers may at their option meet this objective as a total chromium objective.

b) If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 412F, G, and H (Standard Methods for the Examination of Water and Wastewater. Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation. Most recent edition.).

c) Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: $y =$ the water quality objective (in mg/l) to apply when chlorine is being discharged;

$x =$ the duration of uninterrupted chlorine discharge in minutes.

*See Appendix I for definition of terms.

Chapter III PROGRAM OF IMPLEMENTATION

A. Implementation Provisions for Table B

1. ~~A.~~ Calculation of Effluent Limitations

a. Effluent limitations for water quality objectives listed in Table B, with the exception of radioactivity, shall be determined through the use of the following equation:

$$Ce = Co + Dm (Co - Cs) \quad (1)$$

where:

Ce = the effluent concentration limit,
Co = the concentration (water quality objective) to be met at the completion of initial* dilution,
Cs = background seawater concentration (see Table C below),
Dm = minimum probable initial* dilution expressed as parts seawater per part wastewater.

b. For the purpose of this Plan, minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure.

c. The Executive Director of the SWRCB shall identify standard dilution models for use in determining Dm, and shall assist the Regional Board in evaluating Dm for specific waste discharger. Dischargers may propose alternative methods of calculating Dm, and the Regional Board may accept such method upon verification of its accuracy and applicability.

TABLE C
BACKGROUND SEAWATER CONCENTRATIONS (Cs)

Waste Constituent	Cs (mg/l)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8

For all other Table B parameters, Cs = 0.

*See Appendix I for definition of terms.

d. The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

e. The daily maximum shall apply to flow weighted 24hour composite samples.

f. The instantaneous maximum shall apply to grab sample determinations.

g. If only one sample is collected during the time period associated with the water quality objective (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

h. Discharge requirements shall also specify effluent limitations in terms of mass emission rate limits utilizing the general formula:

lbs/day = 8.34 x Ce x Q (2)

i. The six-month median limit on daily mass emissions shall be determined using the six-month median effluent concentration as Ce and the observed flow rate Q in millions of gallons per day. The daily maximum mass emission shall be determined using the daily maximum effluent concentration limit as Ce and the observed flow rate Q in millions of gallons per day.

j. Any significant change in waste* flow shall be cause for reevaluating effluent limitations.

2. ~~B.~~ Compliance Determination

a. All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Compliance based on a single sample analysis should be determined where appropriate as described below.

b. When a calculated effluent limitation is greater than or equal to the PQL*, compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.

c. When the calculated effluent limitation is below the PQL*, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL*.

*See Appendix I for definition of terms.

d. When the calculated effluent limitation is below the PQL*, and recurrent analytical responses between the PQL* and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples. Sufficient sampling and analysis shall be required to determine compliance.

e. Published values for MDL*s and PQL*s should be used except where revised MDL*s and PQL*s are available from recent laboratory performance evaluations, in which case the revised MDL*s and PQL*s should be used. Where published values are not available the Regional Boards should determine appropriate values based on available information.

f. If a discharger believes the sample matrix under consideration in the waste discharge requirements is sufficiently different from that used for an established MDL* value, the discharger may demonstrate to the satisfaction of the Regional Board what the appropriate MDL* should be for the discharger's matrix. In this case the PQL* shall be established at the limit of quantitation (equal to 10 standard deviations above the average measured blank used for development of the MDL* in the discharger's matrix).

g. When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs) concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL* for that parameter.

h. Due to the large total volume of powerplant and other heat exchange discharges, special procedures must be applied for determining compliance with Table B objectives on a routine basis. Effluent concentration values (Ce) shall be determined through the use of equation 1 considering the minimal probable initial* dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 2. The mass emission limits will then serve as requirements applied to all inplant waste* streams taken together which discharge into the cooling water flow, except that limits for total chlorine residual, chronic* toxicity and instantaneous maximum concentrations in Table B shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water. The Table B objective for radioactivity shall apply to the undiluted combined final effluent.

3. ~~C.~~ Toxicity Reduction Requirements

a. If a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table B, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

*See Appendix I for definition of terms.

b. The following shall be incorporated into waste discharge requirements: (1) a requirement to conduct a TRE if the discharge consistently exceeds its toxicity effluent limitation, and (2) a provision requiring a discharger to take all reasonable steps to reduce toxicity once the source of toxicity is identified.

B. *Implementation Provisions for* Bacterial Assessment and Remedial Action Requirements

1. The requirements listed below shall be used to ~~1.)~~ determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination, ~~2)~~ generate information which can be used in the development of an enterococcus standard, and ~~3)~~ provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

   a. Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of *Chapter II.B.1* ~~Section II.A.1.,~~ if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board shall require the appropriate agency to conduct a survey to determine if that agency's discharge is the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board shall take action to control the source.

   b. Waste discharge requirements shall require the discharger to conduct sanitary surveys when so directed by the Regional Board. Waste discharge requirements shall contain provisions requiring the discharger to control any controllable discharges identified in a sanitary survey.

C. ~~B.~~ Revision of Waste* Discharge Requirements

1. The Regional Board shall revise the waste* discharge requirements for existing* discharges as necessary to achieve compliance with this Plan and shall also establish a time schedule for such compliance.

2. The Regional Boards may establish more restrictive water quality objectives and effluent limitations than those set forth in this Plan as necessary for the protection of beneficial uses of ocean* waters.

3. Regional Boards may impose alternative less restrictive provisions than those contained within Table B of the Plan, provided an applicant can demonstrate that:

*See Appendix I for definition of terms.

a. Reasonable control technologies (including source control, material substitution, treatment and dispersion) will not provide for complete compliance; or

b. Any less stringent provisions would encourage water* reclamation;

4. Provided further that:

a) Any alternative water quality objectives shall be below the conservative estimate of chronic toxicity, as given in Table D below, and such alternative will provide for adequate protection of the marine environment;

b) A receiving water quality toxicity* objective of 1 TUc is not exceeded; and

c) The State Board grants an exception (Chapter *III. G.* ~~VI.F.~~) to the Table B limits as established in the Regional Board findings and alternative limits.

TABLE D
CONSERVATIVE ESTIMATES OF CHRONIC TOXICITY

Constituent	Estimate of Chronic Toxicity (mg/l)
Arsenic	19
Cadmium	8
Hexavalent Chromium	18
Copper	5
Lead	22
Mercury	0.4
Nickel	48
Silver	3
Zinc	51
Cyanide	10
Total Chlorine Residual	10.0
Ammonia	4000.0
Phenolic Compounds (non-chlorinated)	a) (see below)
Chlorinated Phenolics	a)
Chlorinated Pesticides and PCB's	b)

a) There *are* ~~is~~ insufficient data for phenolics to estimate chronic toxicity levels. Requests for modification of water quality objectives for these waste* constituents must be supported by chronic toxicity data for representative sensitive species. In such cases, applicants seeking modification of water quality objectives should consult the Regional Water Quality Control Board to determine the species and test conditions necessary to evaluate chronic effects.

*See Appendix I for definition of terms.

b) Limitations on chlorinated pesticides and PCB's shall not be modified so that the total of these compounds is increased above the objectives in Table B.

D. Monitoring Program

1. The Regional 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 Board to provide monitoring reports. Monitoring provisions contained in waste discharge requirements shall be in accordance with the Monitoring Procedures provided in Appendix II.

2. Where the Regional Board is satisfied that any substance(s) of Table B will not significantly occur in a discharger's effluent, the Regional Board may elect not to require monitoring for such substance(s), provided the discharger submits periodic certification that such substance(s) are not added to the waste* stream, and that no change has occurred in activities that could cause such substance(s) to be present in the waste* stream. Such election does not relieve the discharger from the requirement to meet the objectives of Table B.

3. The Regional Board may require monitoring of bioaccumulation of toxicants in the discharge zone. Organisms and techniques for such monitoring shall be chosen by the Regional Board on the basis of demonstrated value in waste* discharge monitoring.

E. Discharge Prohibitions

1. ~~A.~~ Hazardous Substances

a. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste* into the ocean* is prohibited.

2~~B~~. Areas of Special Biological Significance.

a. ~~W~~*aste** shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

3. ~~C.~~ Sludge

a. Pipeline discharge of sludge to the ocean* is prohibited by federal law; the discharge of municipal and industrial waste* sludge directly to the ocean*, or into a waste* stream that discharges to the ocean*, is prohibited by this Plan.

*See Appendix I for definition of terms.

The discharge of sludge digester supernatant directly to the ocean*, or to a waste* stream that discharges to the ocean* without further treatment, is prohibited.

b. It is the policy of the SWRCB that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California waters, the SWRCB may consider requests for exceptions to this section under Chapter VI, F. of this Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

4. ~~D.~~ By-Passing

a. The by-passing of untreated wastes* containing concentrations of pollutants in excess of those of Table A or Table B to the ocean* is prohibited.

~~Chapter VI~~

F. General Provisions

1. ~~A.~~ Effective Date

a. This Plan is in effect as of the date of approval by the Office of Administrative Law (OAL).

2. Areas of Special Biological Significance

a. Areas of special biological significance shall be designated by the SWRCB after a public hearing by the Regional Board and review of its recommendations.

G. ~~F.~~ State Board Exceptions to Plan Requirements

1. The State 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 Board determines:

a. 1. The exception will not compromise protection of ocean* waters for beneficial uses, and

b. ~~2.~~ The public interest will be served.

*See Appendix I for definition of terms.

APPENDIX I

DEFINITION OF TERMS

ACUTE TOXICITY

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

TUa = 100/96-hr LC 50%

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

CHLORDANE shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

CHRONIC TOXICITY: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

TUc = 100/NOEL

b. No Observed Effect Level (NOEL)

*See Appendix I for definition of terms.

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II.

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

DEGRADE: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

DICHLOROBENZENES shall mean the sum of 1,2- and 1,3-dichlorobenzene.

ENCLOSED BAYS are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

ENDOSULFAN shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

ESTUARIES AND COASTAL LAGOONS are waters at the mouths of streams which serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams which are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

HEPTACHLOR shall mean the sum of heptachlor and heptachlor epoxide.

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

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*See Appendix I for definition of terms.

INITIAL DILUTION is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

KELP BEDS, for purposes of the bacteriological standards of this plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

MARICULTURE is the culture of plants and animals in marine waters independent of any pollution source.

MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B.

NATURAL LIGHT: Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board.

OCEAN WATERS are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

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*See Appendix I for definition of terms.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

PQL (Practical Quantitation Level) is the lowest concentration of a substance which can be consistently determined within +/- 20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL* for carcinogens is the MDL* x 5, and for noncarcinogens is the MDL* x 10.

SHELLFISH are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

SIGNIFICANT difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

WASTE: As used in this Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

WATER RECLAMATION: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

*See Appendix I for definition of terms.

APPENDIX II

STANDARD MONITORING PROCEDURES

The purpose of this appendix is to provide direction to the Regional Boards on the implementation of the California Ocean Plan and to ensure the reporting of useful information. It is not feasible to cover all circumstances and conditions that could be encountered by all dischargers. Therefore, this appendix should be considered as the basic components of any discharger monitoring program. Regional Boards can deviate from the procedures required in the appendix only with the approval of the State Water Resources Control Board unless the Ocean Plan allows for the selection of alternate protocols by the Regional Boards. If no direction is given in this appendix for a specific provision of the Ocean Plan, it is within the discretion of the Regional Board to establish the monitoring requirements for the provision.

The appendix is organized in the same manner as the Ocean Plan.

Chapter II. *B.*~~A.~~ Bacterial Standards:

For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.

Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate.

Chapter *III.* ~~IV.~~ Table B. Compliance with Table B Objectives:

Procedures, calibration techniques, and instrument/reagent specifications used to determine compliance with Table B shall conform to the requirements of federal regulations (40 CFR 136). All methods shall be specified in the monitoring requirement section of waste discharge requirements.

Where methods are not available in 40 CFR 136, the Regional Boards shall specify suitable analytical methods in waste discharge requirements. Acceptance of data should be predicated on demonstrated laboratory performance.

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*See Appendix I for definition of terms.

The State or Regional Board may, subject to EPA approval, specify test methods which are more sensitive than those specified in 40 CFR 136. Total chlorine residual is likely to be a method detection limit effluent limitation in many cases. The limit of detection of total chlorine residual in standard test methods is less than or equal to 20 mg/l.

Monitoring for the substances in Table B shall be required periodically. For discharges less than 1 MGD (million gallons per day), the monitoring of all the Table B parameters should consist of at least one complete scan of the Table B constituents one time in the life of the waste discharge requirements. For discharges between 1 and 10 MGD, the monitoring frequency shall be at least one complete scan of the Table B substances annually. Discharges greater than 10 MGD shall be required to monitor at least semiannually.

Chapter *III*. ~~IV.~~ Compliance with Toxicity Limitations and Objectives:

Compliance with the acute toxicity limitation (TUa) in Table A shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), EPA, American Public Health Association, or State Board.

The Regional Board shall require the use of critical life stage toxicity tests specified in this Appendix to measure TUc. Other species or protocols will be added to the list after SWRCB review and approval. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Use of critical life stage bioassay testing shall be included in waste discharge requirements as a monitoring requirement for all discharges greater than 100 MGD by January 1, 1991 at the latest. For other major dischargers, critical life stage bioassay testing shall be included as a monitoring requirement one year before the waste discharge requirement is scheduled for renewal. For major dischargers scheduled for waste discharge requirements renewal less than one year after the adoption of the toxicity objective, critical life stage bioassay testing shall be included as a monitoring requirement at the same time as the chronic toxicity effluent limits is established in the waste discharge requirements.

*See Appendix I for definition of terms.

The following tests shall be used to measure TUc. Other tests may be added to the list when approved by the State Board.

Species	Effect	Tier	Reference
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	1,3
red abalone, *Haliotis rufescens*	abnormal shell development	1	1,3
oyster, *Crassostrea gigas*; mussels, *Mytilus spp.*	abnormal shell development; percent survival	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	1,3
shrimp, *Holmesimysis costata*	percent survival; growth	1	1,3
shrimp, *Mysidopsis bahia*	percent survival; growth; fecundity	2	2,4
topsmelt, *Atherinops affinis*	larval growth rate; percent survival	1	1,3
silversides, *Menidia beryllina*	larval growth rate; percent survival	2	2,4

The first tier test methods are the preferred toxicity tests for compliance monitoring. A Regional Board can approve the use of a second tier test method for waste discharges if first tier organisms are not available.

*See Appendix I for definition of terms.

Protocol References

1. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms. U.S. EPA Report No. EPA/600/R-95/136.

2. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms. U.S. EPA Report No. EPA-600-4-91-003.

3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.

4. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

*See Appendix I for definition of terms.

Appendix B
Draft Ocean Plan with Proposed Amendments

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(Continued)

Proposed Amendment
of the Reformatted of the

CALIFORNIA OCEAN PLAN

WATER QUALITY CONTROL PLAN FOR OCEAN WATERS OF CALIFORNIA

INTRODUCTION

A. Purpose and Authority

1. In furtherance of legislative policy set forth in Section 13000 of Division 7 of the California Water Code *(CWC)* (Stats. 1969, Chap. 482) pursuant to the authority contained in Section 13170 and 13170.2 (Stats. 1971, Chap. 1288) the State Water Resources Control Board hereby finds and declares that protection of the quality of the ocean* waters for use and enjoyment by the people of the State requires control of the discharge of waste* to ocean* waters in accordance with the provisions contained herein. The Board finds further that this plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation* to marine species or posing a threat to public health.

B. Principles

1. Harmony Among Water Quality Control Plans and Policies.

a. In the adoption and amendment of water quality control plans, it is the intent of this Board that each plan will provide for the attainment and maintenance of the water quality standards of downstream waters.

b. To the extent there is a conflict between a provision of this plan and a provision of another statewide plan or policy, or a regional water quality control plan (basin plan), the more stringent provision shall apply except that the provisions of this plan shall apply in the case of any conflict between this plan and the provision in basin plans which states that, as a general rule, downstream objectives apply to upstream tributaries.

c. Pursuant to Section 13140 CWC, this plan is intended to conform to any state policy for water quality control. In particular, the provisions of Section 13142.5 CWC and the statewide policies included in Appendix II.

*See Appendix I for definition of terms.

C. This plan is applicable, in its entirety, to point source discharges to the ocean*. Nonpoint sources of waste* discharges to the ocean* are subject to Chapter I Beneficial Uses, Chapter II - WATER QUALITY OBJECTIVES, Part G, ~~Chapter III General Requirements, Chapter IV~~ Table B (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 ~~V Discharge Prohibitions~~.

D. This plan is not applicable to discharges to enclosed* bays and estuaries* or inland waters, nor is it applicable to vessel wastes, or the control of dredging* ~~spoil~~ material.

E. Provisions regulating the thermal aspects of waste* discharged to the ocean* are set forth in the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed* Bays and Estuaries* of California.

F. Within this Plan, references to the State board or SWRCB shall mean the State Water Resources Control Board. References to a Regional Board or RWQCB shall mean a California Regional Water Quality Control Board. References to the Environmental Protection Agency, US EPA or EPA shall mean the federal Environmental Protection Agency.

~~Chapter I~~

Chapter I BENEFICIAL USES

A. The beneficial uses of the ocean* waters of the State that shall be protected include industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture*; preservation and enhancement of *designated* Areas* of Special Biological Significance *(ASBS), Outstanding* National Resource Waters (ONRWs) and Outstanding* State Resource Waters (OSRWs)*; rare and endangered species; marine habitat; fish migration; fish spawning and shellfish* harvesting.

*See Appendix I for definition of terms.

~~Chapter II~~

Chapter II WATER QUALITY OBJECTIVES

A. General Provisions

1. This chapter 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. The discharge of waste* shall not cause violation of these objectives.

2. The Water Quality Objectives and Effluent Limitations are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

3. Compliance with the water quality objectives of this chapter shall be determined from samples collected at stations representative of the area within the waste field where initial* dilution is completed.

B~~A~~. Bacterial Characteristics

1. Water-Contact Standards

a. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp* beds, the following bacterial objectives shall be maintained throughout the water column:

(1)~~a.~~ Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

(2)~~b.~~ The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

*See Appendix I for definition of terms.

b. The "Initial* Dilution Zone" of wastewater outfalls shall be excluded from designation as "kelp* beds" for purposes of bacterial standards, and Regional Boards should recommend extension of such exclusion zone where warranted to the SWRCB (for consideration under Chapter III.H. ~~VI.F.~~). Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp* beds for purposes of bacterial standards.

2. Shellfish* Harvesting Standards

a. At all areas where shellfish* may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

(1) The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

C. Physical Characteristics

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste* shall not cause aesthetically undesirable discoloration of the ocean* surface.

3. Natural* light shall not be significantly* reduced at any point outside the initial* dilution zone as the result of the discharge of waste*.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean* sediments shall not be changed such that benthic communities are degraded*.

D. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste* materials.

2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly* increased above that present under natural conditions.

4. The concentration of substances set forth in Chapter II ~~IV~~, Table B, in marine sediments shall not be increased to levels which would degrade* indigenous biota.

*See Appendix I for definition of terms.

5. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade* marine life.

6. Nutrient materials shall not cause objectionable aquatic growths or degrade* indigenous biota.

E. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded*.

2. The natural taste, odor, and color of fish, shellfish*, or other marine resources used for human consumption shall not be altered.

3. The concentration of organic materials in fish, shellfish* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

F. Radioactivity

1. Discharge of radioactive waste* shall not degrade* marine life.

~~Chapter III~~

G. General Requirements For Management Of Waste Discharge To The Ocean*

1.~~A.~~ 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 healthy and diverse marine community.

2.~~B.~~ Waste discharged* to the ocean* must be essentially free of:

a.~~1.~~ Material that is floatable or will become floatable upon discharge.

b.~~2.~~ Settleable material or substances that may form sediments which will degrade* benthic communities or other aquatic life.

c.~~3.~~ Substances which will accumulate to toxic levels in marine waters, sediments or biota.

d.~~4.~~ Substances that significantly* decrease the natural* light to benthic communities and other marine life.

*See Appendix I for definition of terms.

e.5. Materials that result in aesthetically undesirable discoloration of the ocean* surface.

3.~~C.~~ Waste* effluents shall be discharged in a manner which provides sufficient initial* dilution to minimize the concentrations of substances not removed in the treatment.

4.~~D.~~ Location of waste* discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

a.~~1.~~ Pathogenic organisms and viruses are not present in areas where shellfish* are harvested for human consumption or in areas used for swimming or other body-contact sports.

b.~~2.~~ Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that marine laboratories use as a source of seawater.

c. Water quality conditions existing in ONRWs or OSRWs*, at the time of their designation, are not lowered except as provided in III.C.3 and III.C.4.*

d.~~3.~~ Maximum* protection is provided to the marine environment.

5. Waste* that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing* and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

~~Chapter IV~~
~~QUALITY REQUIREMENTS~~
~~FOR WASTE* DISCHARGES~~
~~(EFFLUENT LIMITATIONS)~~

~~This chapter sets forth the quality requirements for waste* discharge to the ocean*.~~

6. Effluent Limitations

a. Table A effluent limitations apply only to publicly owned treatment works and industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Federal Clean Water Act.

*See Appendix I for definition of terms.

b. Table A effluent limitations~~, and effluent concentrations calculated from Table B water quality objectives,~~ shall apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge), except where otherwise specified in this Plan.

c. The SWRCB is authorized to administer and enforce effluent limitations established pursuant to the Federal Clean Water Act. Effluent limitations established under Sections 301, 302, 306, 307, 316, 403, and 405 of the aforementioned Federal Act and administrative procedures pertaining thereto, are included in this plan by reference. Compliance with Table A effluent limitations, or Environmental Protection Agency Effluent Limitations Guidelines for industrial discharges, based on Best Practicable Control Technology, shall be the minimum level of treatment acceptable under this plan, and shall define reasonable treatment and waste control technology.

TABLE A
EFFLUENT LIMITATIONS

		Limiting Concentrations		
	Unit of Measurement	Monthly (30-day Average)	Weekly (7-day Average)	Maximum at any time
Grease and Oil	mg/l	25	40	75
Suspended Solids			see below+	
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	units		within limits of 6.0 to 9.0 at all times	
~~Acute* Toxicity~~	~~TUa~~	~~1.5~~	~~2.0~~	~~2.5~~

+Suspended Solids: Dischargers shall, as a 30-day average, remove 75% of suspended solids from the influent stream before discharging wastewaters to the ocean*, except that the effluent limitation to be met shall not be lower than 60 mg/l. Regional Boards may recommend that the SWRCB (Chapter *III.G* ~~VI.F~~.), with the concurrence of the Environmental Protection Agency, adjust the lower effluent concentration limit (the 60 mg/l above) to suit the environmental and effluent characteristics of the discharge. As a further consideration in making such recommendation for adjustment, Regional Boards should evaluate effects on existing and potential water* reclamation projects.

If the lower effluent concentration limit is adjusted, the discharger shall remove 75% of suspended solids from the influent stream at any time the influent concentration exceeds four times such adjusted effluent limit.

Effluent limitations shall be imposed in a manner prescribed by the SWRCB 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.

*See Appendix I for definition of terms.

7. Numerical Water Quality Objectives

a. Table B water quality objectives apply to all discharges within the jurisdiction of this *P*~~p~~lan.

b. ~~Table A effluent limitations, and~~ Effluent concentrations calculated from Table B water quality objectives shall apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge), except where otherwise specified in this Plan.

*See Appendix I for definition of terms.

TABLE B
WATER QUALITY OBJECTIVES

	Units of Measurement	Limiting Concentrations 6-Month Median	Daily Maximum	Instantaneous Maximum	
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic	mg/l		8	32	80
Cadmium	mg/l	1	4	10	
Chromium (Hexavalent) (see below, a)	mg/l	2	8	20	
Copper	mg/l	3	12	30	
Lead	mg/l	2	8	20	
Mercury	mg/l	0.04		0.16	0.4
Nickel	mg/l	5	20	50	
Selenium	mg/l	15	60	150	
Silver	mg/l	0.7	2.8	7	
Zinc	mg/l	20	80	200	
Cyanide (see below, b)	mg/l	1	4	10	
Total Chlorine Residua (For intermittent chlorine sources, see below, c)	mg/l		2	8	60
Ammonia (expressed as nitrogen)	mg/l	600	2400	6000	
Acute* Toxicity	TUa		0.3		
Chronic* Toxicity	TUc		1		
Phenolic Compounds (non-chlorinated)	mg/l	30	120	300	
Chlorinated Phenolics	mg/l	1	4	10	
Endosulfan	mg/l	0.009	0.018	0.027	
Endrin	mg/l	0.002	0.004	0.006	
HCH*	mg/l	0.004	0.008	0.012	
Radioactivity**					

** Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section ~~30269~~ 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

*See Appendix I for definition of terms.

Table B Continued

Chemical	30-day Average (mg/l) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS		
acrolein	220	2.2×10^{2}
antimony	1,200	1.2×10^{3}
bis(2-chloroethoxy) methane	4.4	4.4×10^{0}
bis(2-chloroisopropyl) ether	1,200	1.2×10^{3}
chlorobenzene	570	5.7×10^{2}
chromium (III)	190,000	1.9×10^{5}
di-n-butyl phthalate	3,500	3.5×10^{3}
dichlorobenzenes*	5,100	5.1×10^{3}
~~1,1-dichloroethylene~~	~~7,100~~	~~7.1×10^{3}~~
diethyl phthalate	33,000	3.3×10^{4}
dimethyl phthalate	820,000	8.2×10^{5}
4,6-dinitro-2-methylphenol	220	2.2×10^{2}
2,4-dinitrophenol	4.0	4.0×10^{0}
ethylbenzene	4,100	4.1×10^{3}
fluoranthene	15	1.5×10^{1}
hexachlorocyclopentadiene	58	5.8×10^{1}
~~isophorone~~	~~150,000~~	~~1.5×10^{5}~~
nitrobenzene	4.9	4.9×10^{0}
thallium	~~142~~ 2	2×10^{0}
toluene	85,000	8.5×10^{4}
~~1,1,2,2-tetrachloroethane~~	~~1,200~~	~~1.2×10^{3}~~
tributyltin	0.0014	1.4×10^{-3}
1,1,1-trichloroethane	540,000	5.4×10^{5}
~~1,1,2-trichloroethane~~	~~43,000~~	~~4.3×10^{4}~~
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS		
acrylonitrile	0.10	1.0×10^{-1}
aldrin	0.000022	2.2×10^{-5}
benzene	5.9	5.9×10^{0}
benzidine	0.000069	6.9×10^{-5}
beryllium	0.033	3.3×10^{-2}
bis(2-chloroethyl) ether	0.045	4.5×10^{-2}
bis(2-ethylhexyl) phthalate	3.5	3.5×10^{0}
carbon tetrachloride	0.90	9.0×10^{-1}
chlordane*	0.000023	2.3×10^{-5}
chlorodibromomethane	8.6	8.6×10^{0}
chloroform	130	1.3×10^{2}
DDT*	0.00017	1.7×10^{-4}
1,4-dichlorobenzene	18	1.8×10^{1}

*See Appendix I for definition of terms.

Table B Continued

Chemical	30-day Average (mg/l) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS		
3,3'-dichlorobenzidine	0.0081	8.1×10^{-3}
1,2-dichloroethane	~~13~~28	2.8×10^{1}
1,1-dichloroethylene	0.9	9×10^{-1}
dichlorobromomethane	6.2	6.2×10^{0}
dichloromethane	450	4.5×10^{2}
1,3-dichloropropene	8.9	8.9×10^{0}
dieldrin	0.00004	4.0×10^{-5}
2,4-dinitrotoluene	2.6	2.6×10^{0}
1,2-diphenylhydrazine	0.16	1.6×10^{-1}
halomethanes*	130	1.3×10^{2}
~~heptachlor*~~	~~0.00072~~	~~7.2×10^{-4}~~
heptachlor	0.00005	5×10^{-5}
heptachlor epoxide	0.00002	2×10^{-5}
hexachlorobenzene	0.00021	2.1×10^{-4}
hexachlorobutadiene	14	1.4×10^{1}
hexachloroethane	2.5	2.5×10^{0}
isophorone	730	7.3×10^{2}
N-nitrosodimethylamine	7.3	7.3×10^{0}
N-nitrosodi-N-propylamine	0.38	3.8×10^{-1}
N-nitrosodiphenylamine	2.5	2.5×10^{0}
PAHs*	0.0088	8.8×10^{-3}
PCBs*	0.000019	1.9×10^{-5}
TCDD equivalents*	0.0000000039	3.9×10^{-9}
1,1,2,2-tetrachloroethane	2.3	2.3×10^{0}
tetrachloroethylene	~~99~~2.0	2.0×10^{0}
toxaphene	0.00021	2.1×10^{-4}
trichloroethylene	27	2.7×10^{1}
1,1,2-trichlorethane	9.4	9.4×10^{0}
2,4,6-trichlorophenol	0.29	2.9×10^{-1}
vinyl chloride	36	3.6×10^{1}

a) Dischargers may at their option meet this objective as a total chromium objective.

b) If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by

*See Appendix I for definition of terms.

~~Standard Methods 412F, G, and H (Standard Methods for the Examination of Water and Wastewater, Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation. Most recent edition.~~). the approved method in 40 CFR PART 136, as revised July 1, 1997.

c) Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: y = the water quality objective (in mg/l) to apply when chlorine is being discharged;

x = the duration of uninterrupted chlorine discharge in minutes.

*See Appendix I for definition of terms.

Chapter III PROGRAM OF IMPLEMENTATION

A. Implementation Provisions for Table B

1. ~~A.~~ Calculation of Effluent Limitations

a. Effluent limitations for water quality objectives listed in Table B, with the exception of acute* toxicity and radioactivity, shall be determined through the use of the following equation:

$$Ce = Co + Dm\ (Co - Cs) \quad (1)$$

The effluent limitation for the acute* toxicity objective listed in Table B shall be determined through the use of the following equation:

$$Ce = Ca + (0.1)\ Dm\ (Ca - Cs) \quad (2)$$

where:

Ca = the concentration (water quality objective) to be met at the edge of the acute mixing zone.
Ce = the effluent concentration limit,
Co = the concentration (water quality objective) to be met at the completion of initial* dilution,
Cs = background seawater concentration (see Table C below),
Dm = minimum probable initial* dilution expressed as parts seawater per part wastewater.

b. Determining a Mixing Zone for the Acute* Toxicity Objective

The mixing zone for the acute* toxicity objective shall be ten percent (10%) of the distance from the edge of the outfall structure to the edge of the chronic mixing zone (zone of initial dilution). There is no vertical limitation on this zone.

c. For the purpose of this Plan, minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure.

*See Appendix I for definition of terms.

d. The Executive Director of the SWRCB shall identify standard dilution models for use in determining Dm, and shall assist the Regional Board in evaluating Dm for specific waste discharger. Dischargers may propose alternative methods of calculating Dm, and the Regional Board may accept such method upon verification of its accuracy and applicability.

TABLE C
BACKGROUND SEAWATER CONCENTRATIONS (Cs)

Waste Constituent	Cs (mg/l)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8

For all other Table B parameters, Cs = 0.

e. The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

f. The daily maximum shall apply to flow weighted 24 hour composite samples.

g. The instantaneous maximum shall apply to grab sample determinations.

h. If only one sample is collected during the time period associated with the water quality objective (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

i. Discharge requirements shall also specify effluent limitations in terms of mass emission rate limits utilizing the general formula:

$$\text{lbs/day} = 8.34 \times Ce \times Q \quad (3)$$

j. The six-month median limit on daily mass emissions shall be determined using the six-month median effluent concentration as Ce and the observed flow rate Q in millions of gallons per day. The daily maximum mass emission shall be determined using the daily maximum effluent concentration limit as Ce and the observed flow rate Q in millions of gallons per day.

k. Any significant change in waste* flow shall be cause for reevaluating effluent limitations.

*See Appendix I for definition of terms.

~~B. Compliance Determination~~

~~All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Compliance based on a single sample analysis should be determined where appropriate as described below.~~

~~When a calculated effluent limitation is greater than or equal to the PQL*, compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.~~

~~When the calculated effluent limitation is below the PQL*, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL*.~~

~~When the calculated effluent limitation is below the PQL*, and recurrent analytical responses between the PQL* and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples. Sufficient sampling and analysis shall be required to determine compliance.~~

~~Published values for MDL*s and PQL*s should be used except where revised MDL*s and PQL*s are available from recent laboratory performance evaluations, in which case the revised MDL*s and PQL*s should be used. Where published values are not available the Regional Boards should determine appropriate values based on available information.~~

~~If a discharger believes the sample matrix under consideration in the waste discharge requirements is sufficiently different from that used for an established MDL* value, the discharger may demonstrate to the satisfaction of the Regional Board what the appropriate MDL* should be for the discharger's matrix. In this case the PQL* shall be established at the limit of quantitation (equal to 10 standard deviations above the average measured blank used for development of the MDL* in the discharger's matrix).~~

~~When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs) concentrations of individual members of the group may be considered to be zero if the analytical response for individuals chemicals falls below the MDL* for that parameter.~~

*See Appendix I for definition of terms.

2. Reporting Levels

The discharger shall report the results of analytical determinations for the presence of chemical constituents using the following reporting levels:

1. Sample results greater than or equal to the Minimum Level* in Appendix III will be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample).

2. Sample results less than the Minimum Level* in Appendix III but greater than or equal to the laboratory's MDL* are not quantifiable and will be reported as "Detected, but Not Quantified", or DNQ. The estimated chemical concentration shall also be reported.

3. Sample results less than the laboratory MDL* will be reported as "Not Detected", or ND.

The MDL* and the Minimum Level* shall be reported with each sample result.

3. Compliance Determination

Sufficient sampling and analysis shall be required to determine compliance with effluent limitations in the Waste* Discharge Requirement.

Dischargers shall be out of compliance with the calculated effluent limitation if the concentration of the constituent of concern in the monitoring sample is greater than the calculated effluent limitation and greater than or equal to the Minimum Levels* listed in Appendix III or in 40 CFR 136, Appendix B (revised July 1, 1996).

If sample results are reported as DNQ and the calculated effluent limitation is less than the Minimum Level*, the discharger shall be required to develop and conduct a Pollutant Minimization Program whenever there is evidence (e.g., health advisories for fish consumption, sample results from more sensitive analytical methods, presence of whole effluent toxicity,

*See Appendix I for definition of terms.

results of benthic or aquatic organism tissue sampling) that the constituent of concern is present in the effluent above the calculated effluent limitation. Regional Boards may include special provisions in the Waste Discharge Requirement to require the gathering of such evidence to determine whether the constituent of concern is present in the effluent at levels above the calculated effluent limitation.

If sample results are reported as ND and the calculated effluent limitation is less than the Method Detection Limit*, the discharger shall also be required to develop and conduct a Pollutant Minimization Program whenever there is evidence (as above) that the constituent of concern is present in the effluent above the calculated effluent limitation.

The goal of the Pollutant Minimization Program shall be to reduce all potential sources of the pollutant to maintain the effluent at or below the calculated effluent limitation. The Regional Board may consider cost-effectiveness when establishing the requirements of a pollutant minimization program. The program shall include, but not be limited to, the following:

1. An annual review and semi-annual monitoring of potential sources of the reportable substance, which may include fish tissue monitoring and other bio-uptake sampling.

2. Quarterly monitoring for the pollutant in the influent to the wastewater treatment system;

3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable substance in the effluent at or below the calculated effluent limitation;

4. When the sources of the reportable substance are discovered, appropriate cost-effective control measures shall be implemented, consistent with the control strategy; and

5. An annual status report that shall be sent to the RWQCB including:

    a. All minimization program monitoring results for the previous year.

    b. A list potential sources of the reportable substance; and

    c. A summary of all action taken to reduce or eliminate the identified sources of the reportable substance.

*See Appendix I for definition of terms.

The concentration of the constituent of concern in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the Minimum Level*). When one or more sample results are reported as ND or DNQ, the concentration of the constituent shall be the median (middle) value of the multiple samples. If, in an even number of samples, one of the middle values is ND or DNQ, the discharger shall be in compliance with the effluent limitation.

When determining compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's), the individual constituent of the group shall be considered to have a concentration of zero if the constituent is reported as ND. Individual constituents of a group shall be considered to have a concentration equal to the MDL* if the sample constituent is reported as DNQ.

When more than one Minimum Level* is listed for a given chemical constituent, the Regional Board shall select the appropriate Minimum Level* for use in compliance determination. If the calculated effluent limitation is lower than all Minimum Levels* listed in Appendix III for a particular constituent, the Regional Board shall select the lowest Minimum Level* in Appendix III for compliance determination. Dischargers may develop and use Minimum Levels lower than those listed in Appendix III and 40 CFR 136 after approval by the Regional Board and the State Water Board's Quality Assurance Program.

The Regional Board shall determine the appropriate Minimum Level* for chemical constituents not listed in Appendix III. If a discharger believes the sample matrix in their waste discharge is sufficiently different from that used to establish the Minimum Level*, the discharger may demonstrate to the satisfaction of the Regional Board what the appropriate Minimum Level* should be for the discharger's matrix.

Due to the large total volume of powerplant and other heat exchange discharges, special procedures must be applied for determining compliance with Table B objectives on a routine basis. Effluent concentration values (Ce) shall be determined through the use of equation 1 considering the minimal probable initial* dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 3. The mass emission limits will then serve as requirements applied to all inplant

*See Appendix I for definition of terms.

waste* streams taken together which discharge into the cooling water flow, except that limits for total chlorine residual, chronic* toxicity and instantaneous maximum concentrations in Table B shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water.

The Table B objective for radioactivity shall apply to the undiluted combined final effluent.

4. ~~C.~~ Toxicity Reduction Requirements

a. If a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table B, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

b. The following shall be incorporated into waste discharge requirements: (1) a requirement to conduct a TRE if the discharge consistently exceeds its toxicity effluent limitation, and (2) a provision requiring a discharger to take all reasonable steps to reduce toxicity once the source of toxicity is identified.

B. *Implementation Provisions for* Bacterial Assessment and Remedial Action Requirements

1. The requirements listed below shall be used to ~~1.)~~ determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination, ~~2)~~ generate information which can be used in the development of an enterococcus standard, and ~~3)~~ provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

a. Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of *Chapter II.B.1* ~~Section II.A.1.,~~ if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board shall require the appropriate agency to conduct a survey to determine if that agency's discharge is the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board shall take action to control the source.

*See Appendix I for definition of terms.

b. Waste discharge requirements shall require the discharger to conduct sanitary surveys when so directed by the Regional Board. Waste discharge requirements shall contain provisions requiring the discharger to control any controllable discharges identified in a sanitary survey.

C. Implementation Provisions For Areas of Special Biological Significance and Outstanding* National and State Resource Waters.*

1. A primary purpose of ASBS, ONRWs* and OSRWs* is to protect the water quality existing at the time of designation. No degradation of water quality is to be permitted, notwithstanding any other provision of this Plan that may allow water quality to be lowered, other than that provided for limited-term activities in C.3. below, and for Outstanding* State Resource Waters in C.4 below.*

2. Existing discharges of waste into designated waters administered by this Plan, or affecting such waters, shall be controlled by the appropriate Regional Boards to ensure that they receive the level of treatment required to prevent degradation of water quality in the designated waters. Waste discharge requirements or permits for such existing* waste discharges shall be reviewed as soon as reasonably possible following the designation, and at each regularly scheduled review, to determine if there is a reasonable potential for the discharge to cause or contribute to a lowering of water quality in the designated area.*

(a) If there is a finding that the discharge will not lower water quality, the discharge may continue until the next regularly scheduled review.

(b) If there is a finding that the discharge has the potential to cause or contribute to a lowering of water quality in the designated areas, the Regional Board may modify the waste discharge requirements or take other actions necessary to ensure that water quality is not lowered in the designated area. Modifications to waste discharge requirements may include (1) appropriate conditions and a schedule of compliance to ensure that reasonable progress is made toward attaining water quality standards for the designated area, and (2) a provision that allows the permitting authority to reopen and modify the permit in order to obtain compliance with water quality standards.

3. The SWRCB and RWQCBs may exercise their authority to permit or certify limited-term activities in ONRWs, OSRWs* and ASBS* which may result in temporary and short-term changes in water quality, including but not limited to, maintenance/repair of existing boat facilities, restoration of sea walls, repair of existing storm water pipes, and replacement/repair of existing bridges. Waste discharge requirements or certifications for such activities shall be limited to a reasonable period, considering risk of adverse impacts to beneficial uses, risk of significant lowering of water quality outside the boundaries of a mixing* zone defined by the Regional Board, and the time and resources necessary for project completion.*

*See Appendix I for definition of terms.

4. Any person may file a petition with the SWRCB or a RWQCB to modify the boundary or lower the water quality of a designated OSRW, or to have the designation removed. The petition shall include:*

(a) The specific boundary change that would be modified or the specific water quality parameters that would be lowered;

(b) A description of any proposed activity which could take place if the petition is granted, including a list of the other approvals needed and an estimate of the time required for the approvals;

(c) An analysis of alternatives to the proposed activity, or enhanced treatment alternatives, which could eliminate the need to modify the boundary, or significantly reduce the need to lower the water quality of the OSRW;*

(d) An antidegradation analysis sufficient to meet the requirements of state and federal regulations, including SWRCB Resolution No. 68-16;

D.~~B.~~ Revision of Waste* Discharge Requirements

1. The Regional Board shall revise the waste* discharge requirements for existing* discharges as necessary to achieve compliance with this Plan and shall also establish a time schedule for such compliance.

2. The Regional Boards may establish more restrictive water quality objectives and effluent limitations than those set forth in this Plan as necessary for the protection of beneficial uses of ocean* waters.

3. Regional Boards may impose alternative less restrictive provisions than those contained within Table B of the Plan, provided an applicant can demonstrate that:

   a. Reasonable control technologies (including source control, material substitution, treatment and dispersion) will not provide for complete compliance; or

   b. Any less stringent provisions would encourage water* reclamation;

4. Provided further that:

   a) Any alternative water quality objectives shall be below the conservative estimate of chronic toxicity, as given in Table D below, and such alternative will provide for adequate protection of the marine environment;

   b) A receiving water quality toxicity* objective of 1 TUc is not exceeded; and

*See Appendix I for definition of terms.

c) The State Board grants an exception (Chapter *III. G.* ~~VI.F.~~) to the Table B limits as established in the Regional Board findings and alternative limits.

TABLE D
CONSERVATIVE ESTIMATES OF CHRONIC TOXICITY

Constituent	Estimate of Chronic Toxicity (mg/l)
Arsenic	19
Cadmium	8
Hexavalent Chromium	18
Copper	5
Lead	22
Mercury	0.4
Nickel	48
Silver	3
Zinc	51
Cyanide	10
Total Chlorine Residual	10.0
Ammonia	4000.0
Phenolic Compounds (non-chlorinated)	a) (see below)
Chlorinated Phenolics	a)
Chlorinated Pesticides and PCB's	b)

a. There *are* ~~is~~ insufficient data for phenolics to estimate chronic toxicity levels. Requests for modification of water quality objectives for these waste* constituents must be supported by chronic toxicity data for representative sensitive species. In such cases, applicants seeking modification of water quality objectives should consult the Regional Water Quality Control Board to determine the species and test conditions necessary to evaluate chronic effects.

b. Limitations on chlorinated pesticides and PCB's shall not be modified so that the total of these compounds is increased above the objectives in Table B.

E. Monitoring Program

1. The Regional 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 Board to provide monitoring reports. Monitoring provisions contained in waste discharge requirements shall be in accordance with the Monitoring Procedures provided in Appendix IV.

*See Appendix I for definition of terms.

2. Where the Regional Board is satisfied that any substance(s) of Table B will not significantly occur in a discharger's effluent, the Regional Board may elect not to require monitoring for such substance(s), provided the discharger submits periodic certification that such substance(s) are not added to the waste* stream, and that no change has occurred in activities that could cause such substance(s) to be present in the waste* stream. Such election does not relieve the discharger from the requirement to meet the objectives of Table B.

3. The Regional Board may require monitoring of bioaccumulation of toxicants in the discharge zone. Organisms and techniques for such monitoring shall be chosen by the Regional Board on the basis of demonstrated value in waste* discharge monitoring.

F. Discharge Prohibitions

1~~A.~~ Hazardous Substances

a. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste* into the ocean* is prohibited.

2.~~B.~~ Areas ~~of~~ *Designated for* Special *Water Quality Protection*. ~~Biological Significance.~~

a. *New* or increased sources of* ~~W~~*waste** shall not be discharged to ~~areas~~ designated ~~as being~~ *Areas** of ~~s~~Special ~~b~~*B*iological ~~s~~Significance or *Outstanding* National Resource Waters*. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

b. *New* or increased sources of waste shall not be discharged to Outstanding* State Waters unless an exception is granted by the State Board as provided in Chapter III. C.4.*

3.~~C.~~ Sludge

a. Pipeline discharge of sludge to the ocean* is prohibited by federal law; the discharge of municipal and industrial waste* sludge directly to the ocean*, or into a waste* stream that discharges to the ocean*, is prohibited by this Plan. The discharge of sludge digester supernatant directly to the ocean*, or to a waste* stream that discharges to the ocean* without further treatment, is prohibited.

b. It is the policy of the SWRCB that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California waters, the SWRCB may consider requests for exceptions to this section under Chapter VI, F. of this Plan, provided further that an Environmental Impact Report on the

*See Appendix I for definition of terms.

proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

~~4D.~~ By-Passing

a. The by-passing of untreated wastes* containing concentrations of pollutants in excess of those of Table A or Table B to the ocean* is prohibited.

~~Chapter VI~~

G. General Provisions

1~~A.~~Effective Date

a. This Plan is in effect as of the date of approval by the Office of Administrative Law (OAL).

2. Areas of Special Biological Significance

a. *ASBS** ~~Areas of special biological significance~~ shall be designated by the SWRCB after a public hearing by the Regional Board and review of its recommendations following the procedures in Appendix V. *A list of ASBS* shall be available in Appendix VII.*

3. Outstanding National and State Resource Waters*

a. ONRWs and OSRWs* shall be designated by the SWRCB or a RWQCB as provided by the procedures included in Appendix VI. A list of ONRWs and OSRWs shall be available in Appendix VII.*

H~~F.~~ State Board Exceptions to Plan Requirements

1. The State 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 Board determines:

a.1. The exception will not compromise protection of ocean* waters for beneficial uses, and

b.~~2.~~ The public interest will be served

*See Appendix I for definition of terms.

APPENDIX I

DEFINITION OF TERMS

ACUTE TOXICITY

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

TUa = 100/96-hr LC 50%

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

~~When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:~~

~~$TUa = \frac{\log (100 - S)}{1.7}$~~

~~S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero~~.

Example for the Acute Toxicity Objective:

1. Assumptions:

a. National Pollution Discharge Elimination System (NPDES) permittee has 100 dilution credits for the minimum probable initial dilution based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence initial dilution process, flow across the discharge structure.

b. The data (TUa value of 0.3, 100 dilution credits for the minimum probable initial dilution, and a value of 0 for the background seawater concentration) are added to the equation:

$$Ce = Ca + (0.1)Dm (Ca - Cs) \quad (2)$$

*See Appendix I for definition of terms.

Ce = 0.3 + (0.1)(100) (0.3 - 0) (2)

Ce = 0.3 + 10 (0.3)

Ce = 3.3

c. The TUa effluent limitation value is 3.3

3.3TUa = 100/LC50

LC50 = 30% effluent

2. Calculation of dilution series for testing:

A. Need five concentrations and a control

B. Bracket the LC50 - 30% effluent

C. 7.5%, 15%, 30%, 60%, 90% effluent (0.5 dilution series)

NPDES permittee now performs the toxicity tests to determine if compliance is met.

CHLORDANE shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

CHRONIC TOXICITY: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

TUc = 100/NOEL

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II.

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

*See Appendix I for definition of terms.

DEGRADE: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

DICHLOROBENZENES shall mean the sum of 1,2- and 1,3-dichlorobenzene.

DREDGING MATERIAL: Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil".

ENCLOSED BAYS are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

ENDOSULFAN shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

ESTUARIES AND COASTAL LAGOONS are waters at the mouths of streams which serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams which are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

EXISTING, as related to waste discharges, means waste discharges to ocean waters which are being regulated by waste discharge requirements, including NPDES Permits, prior to the date of approval of a water quality control plan or designation of an ONRW, OSRW or ASBS. Changes in (a) the design of a waste discharge facility, (b) volume of the discharge or (c) treatment of the waste will be considered an existing waste discharge to the extent provisions for such changes are included in the waste discharge requirements prior to the date of approval of the water quality control plan or designated area.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride~~), chlorodibromomethane, and dichlorobromomethane~~.

*See Appendix I for definition of terms.

~~HEPTACHLOR shall mean the sum of heptachlor and heptachlor epoxide.~~

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

INITIAL DILUTION is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

KELP BEDS, for purposes of the bacteriological standards of this plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

MARICULTURE is the culture of plants and animals in marine waters independent of any pollution source.

MATERIAL: (a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of this Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGING MATERIAL.

MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B.

MINIMUM LEVEL is the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points when analyzing for pollutants of concern. This level corresponds to the lowest point at which the calibration curve is determined.

*See Appendix I for definition of terms.

NATURAL LIGHT: Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board.

NEW DISCHARGE, relative to ONRWs or OSRWs, includes any discharge of waste which was not operating under a waste discharge requirement or federal permit prior to the date of designation of an ONRW or OSRW. After the date of designation of such waters, any waste discharge which requires a new waste discharge requirement or federal permit will be regarded as a new discharge.*

OCEAN WATERS are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

OUTSTANDING NATIONAL RESOURCE WATERS (ONRWs): High quality waters which constitute an outstanding national resource, such as waters of National and State parks, wildlife refuges and waters of exceptional recreational or ecological significance. Waters of exceptional ecological significance may include water bodies that are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional parameters such as dissolved oxygen, or pH, may not be particularly high or whose characteristics cannot be adequately described by these parameters (such as wetlands).

OUTSTANDING STATE RESOURCE WATERS (OSRWs): High quality waters which constitute an outstanding state resource, such as waters of National and State parks, wildlife refuges and waters of exceptional recreational or ecological significance. Waters of exceptional ecological significance may include water bodies that are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional parameters such as dissolved oxygen, or pH, may not be particularly high or whose characteristics cannot be adequately described by these parameters (such as wetlands).

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

~~PQL (Practical Quantitation Level) is the lowest concentration of a substance which can be consistently determined within +/- 20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL* for carcinogens is the MDL* x 5, and for noncarcinogens is the MDL* x 10.~~

*See Appendix I for definition of terms.

SHELLFISH are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

SIGNIFICANT difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

WASTE: As used in this Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

WATER RECLAMATION: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

*See Appendix I for definition of terms.

APPENDIX II

WATER QUALITY CONTROL POLICIES
ADOPTED BY THE STATE WATER RESOURCES CONTROL BOARD

1. "STATEMENT OF POLICY WITH RESPECT TO MAINTAINING HIGH QUALITY OF WATERS IN CALIFORNIA". Resolution No. 68-16 adopted by the State Water Resources Control Board, October 28, 1968.

2. "STATE POLICY FOR WATER QUALITY CONTROL", adopted by motion of the State Water Resources Control Board on July 6, 1972.

3. "WATER QUALITY CONTROL POLICY FOR THE ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA". Resolution No. 74-43 adopted by the State Water Resources Control Board, May 16, 1974.

4. "WATER QUALITY CONTROL POLICY ON THE USE AND DISPOSAL OF INLAND WATERS USED FOR POWER PLANT COOLING". Resolution No. 75-58 adopted by the State Water Resources Control Board, June 19, 1975.

5. "POLICY WITH RESPECT TO WATER RECLAMATION IN CALIFORNIA". Resolution No. 77-1 adopted by the State Water Resources Control Board, January 6, 1977.

*See Appendix I for definition of terms.

APPENDIX III

Minimum Levels

Minimum Levels for use in compliance determination. These Minimum Levels were derived from data provided by state certified analytical laboratories in 1997 and 1998 for pollutants regulated by the California Ocean Plan. This list is current as of March 31, 1998. These MLs shall be used until new values are adopted by the SWRCB. There are five major chemical groupings: volatile substances, semi-volatile substances, inorganics, pesticides & PCB's, and dioxins & furans. "No Data" is indicated by "--".

Volatile Substances	Minimum Level (ug/L)	
	GC Method [a]	GCMS Method [b]
Acrolein	2	5
Acrylonitrile	2	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroform	0.5	2
1,2-Dichlorobenzene (volatile)	0.5	2
1,3-Dichlorobenzene (volatile)	0.5	2
1,4-Dichlorobenzene (volatile)	0.5	2
Dichlorobromomethane	0.5	2
1,1-Dichloroethane	0.5	1
1,2-Dichloroethane	0.5	2
1,1-Dichloroethylene	0.5	2
Dichloromethane	0.5	2
1,3-Dichloropropene (volatile)	0.5	2
Ethyl benzene	0.5	2
Methyl Bromide	1	2
Methyl Chloride	0.5	2
1,1,2,2-Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
1,1,1-Trichloroethane	0.5	2
1,1,2-Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2

a) GC Method = Gas Chromatography
b) GCMS Method = Gas Chromatography / Mass Spectrometry

*See Appendix I for definition of terms.

Semi-Volatile Substances	Minimum Level (ug/L)*			
	GC Method [a]	GCMS Method [b]	HPLC Method [c]	COLOR Method [d]
Acenapthylene	--	10000	200	--
Anthracence	--	10000	2000	--
Benzidine	--	5000	--	--
Benzo(a)anthracene	10000	5000	--	--
Benzo(a)pyrene	--	10000	2000	--
Benzo(b)fluoranthene	--	10000	10000	--
Benzo(g,h,i)perylene	--	5000	100	--
Benzo(k)floranthene	--	10000	2000	--
Bis 2-(1-Chloroethoxyl) methane	--	5000	--	--
Bis(2-Chloroethyl)ether	10000	1000	--	--
Bis(2-Chloroisopropyl)ether	10000	2000	--	--
Bis(2-Ethylhexyl) phthalate	10000	5000	--	--
2-Chlorophenol	2000	5000	--	--
Chrysene	--	10000	5000	--
Di-n-butyl phthalate	--	10000	--	--
Dibenzo(a,h)anthracene	--	10000	100	--
1,2-Dichlorobenzene (semivolatile)	2000	2000	--	--
1,3-Dichlorobenzene (semivolatile)	2000	1000	--	--
1,4-Dichlorobenzene (semivolatile)	2000	1000	--	--
3,3-Dichlorobenzidine	--	5000	--	--
2,4-Dichlorophenol	1000	5000	--	--
1,3-Dichloropropene (semivolatile)	--	10	--	--
Diethyl phthalate	10000	2000	--	--
Dimethyl phthalate	10000	2000	--	--
2,4-Dimethylphenol	1000	2000	--	--
2,4-Dinitrophenol	5000	5000	--	--
2,4-Dinitrotoluene	10000	5000	--	--
1,2-Diphenylhydrazine	--	1000	--	--
Fluoranthene	10000	1000	50	--
Fluorene	--	10000	100	--
Hexachlorobenzene	5000	1000	--	--
Hexachlorobutadiene	5000	1000	--	--
Hexachlorocyclopentadiene	5000	5000	--	--
Hexachloroethane	5000	1000	--	--
Indeno(1,2,3-cd)pyrene	--	10000	50	--
Isophorone	10000	1000	--	--
2-methyl-4,6-dinitrophenol	10000	5000	--	--
3-methyl-4-chlorophenol	5000	1000	--	--
N-nitrosodi-n-propylamine	10000	5000	--	--
N-nitrosodimethylamine	10000	5000	--	--
N-nitrosodiphenylamine	10000	1000	--	--
Nitrobenzene	10000	1000	--	--
2-Nitrophenol	--	10000	--	--
4-Nitrophenol	5000	10000	--	--
Pentachlorophenol	1000	5000	--	--
Phenanthrene	--	5000	50	--
Phenol	1000	1000	--	50
Pyrene	--	10000	50	--
2,4,6-Trinitrophenol	10000	10000	--	--

a) GC Method = Gas Chromatography
b) GCMS Method = Gas Chromatography / Mass Spectrometry
c) HPLC Method = High Pressure Liquid Chromatograph
d) COLOR Method = Colorimetic

* The actual chemical concentrations in water samples are expected to be 1,000 times less than the ML listed here due to concentrating the sample.

*See Appendix I for definition of terms.

Inorganic Substances	Minimum Level (ug/L)								
	COLOR Method[a]	DCP Method[b]	FAA Method[c]	GFAA Method[d]	HYDRIDE Method[e]	ICP Method[f]	ICPMS Method[g]	SPGFAA Method[h]	CVAA Method[i]
Antimony	--	1000	10	5	0.5	50	0.5	5	--
Arsenic	25	1000	--	2	1	10	2	2	--
Beryllium	--	1000	20	0.5	--	2	0.5	1	--
Cadmium	--	1000	10	0.5	--	10	0.25	0.5	--
Chromium(total)	--	1000	50	2	--	10	0.5	1	--
Chromium(VI)	10	--	5	--	--	--	--	--	--
Copper	--	1000	25	5	--	10	0.5	2	--
Cyanide	5	--	--	--	--	--	--	--	--
Lead	--	10000	20	5	--	5	0.5	2	--
Mercury	--	--	--	--	--	--	0.5	--	0.2
Nickel	--	1000	50	5	--	20	1	5	--
Selenium	--	1000	--	5	1	10	2	5	--
Silver	--	1000	10	1	--	10	0.25	2	--
Thallium	--	1000	10	2	--	10	1	5	--
Zinc	--	1000	20	--	--	20	1	10	--

a) COLOR Method = Colorimetric
b) DCP Method = Direct Current Plasma
c) FAA Method = Flame Atomic Absorption
d) GFAA Method = Graphite Furnace Atomic Absorption
e) HYDRIDE Method = Gaseous Hydride Atomic Absorption
f) ICP Method = Inductively Coupled Plasma
g) ICPMS Method = Inductively Coupled Plasma / Mass Spectrometry
h) SPGFAA Method = Stabilized Platform Graphite Furnace Atomic Absorption (i.e. U.S. EPA 200.9)
i) CVAA Method = Cold Vapor Atomic Absorption

Pesticides - PCB's	Minimum Level (ug/L)*
	GC Method[a]
Aldrin	0.5
Chlordane	10
4,4'-DDD	5
4,4'-DDE	5
4,4'-DDT	1
Dieldrin	1
a-Endosulfan	2
b-Endosulfan	1
EndosulfanSulfate	5
Endrin	1
Heptachlor	1
HeptachlorEpoxide	1
a-Hexachlorocyclohexane	1
b-Hexachlorocyclohexane	0.5
d-Hexachlorocyclohexane	0.5
g-Hexachlorocyclohexane (Lindane)	2
PCB1016	50
PCB1221	50
PCB1232	50
PCB1242	50
PCB1248	50
PCB1254	50
PCB1260	50
Toxaphene	50

a) GC Method = Gas Chromatography

*See Appendix I for definition of terms.

* The actual chemical concentrations in water samples are expected to be 100 times less than the ML listed here due to concentrating the sample.

Dioxins - Furans	Minimum Level (ug/L)*
	HRGCMS Method[a]
1,2,3,4,6,7,8-HpCDD	0.000025
1,2,3,4,6,7,8-HpCDF	0.000025
1,2,3,4,7,8,9-HpCDF	0.000025
1,2,3,4,7,8-HxCDD	0.000025
1,2,3,6,7,8-HxCDD	0.000025
1,2,3,7,8,9-HxCDD	0.000025
1,2,3,4,7,8-HxCDF	0.000025
1,2,3,6,7,8-HxCDF	0.000025
1,2,3,7,8,9-HxCDF	0.000025
2,3,4,6,7,8-HxCDF	0.000025
OCDD	0.000050
OCDF	0.000050
1,2,3,7,8-PeCDD	0.000025
1,2,3,7,8-PeCDF	0.000025
2,3,4,7,8-PeCDF	0.000025
2,3,7,8-TCDD	0.000005
2,3,7,8-TCDF	0.000005

a) HRGCMS Method = High Resolution Gas Chromatography/Mass Spectrometry (i.e. U.S. EPA 1613)

* The actual chemical concentrations in water samples are expected to be 1,000 times less than the ML listed here due to concentrating the sample.

*See Appendix I for definition of terms.

APPENDIX IV

STANDARD MONITORING PROCEDURES

The purpose of this appendix is to provide direction to the Regional Boards on the implementation of the California Ocean Plan and to ensure the reporting of useful information. It is not feasible to cover all circumstances and conditions that could be encountered by all dischargers. Therefore, this appendix should be considered as the basic components of any discharger monitoring program. Regional Boards can deviate from the procedures required in the appendix only with the approval of the State Water Resources Control Board unless the Ocean Plan allows for the selection of alternate protocols by the Regional Boards. If no direction is given in this appendix for a specific provision of the Ocean Plan, it is within the discretion of the Regional Board to establish the monitoring requirements for the provision.

The appendix is organized in the same manner as the Ocean Plan. *All references to 40 CFR PART 136 are to the revised edition of July 1, 1997.*

Chapter II. *B.*~~A.~~ Bacterial Standards:

For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) shall be those presented in ~~the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.~~ *Table 1A of 40 CFR PART 136, unless alternate methods have been approved in advance by EPA pursuant to 40 CFR PART 136.*

Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate.

Chapter *III.* ~~IV.~~ Table B. Compliance with Table B Objectives:

Procedures, calibration techniques, and instrument/reagent specifications used to determine compliance with Table B shall conform to the requirements of federal regulations (40 CFR *PART* 136). All methods shall be specified in the monitoring requirement section of waste discharge requirements.

Where methods are not available in 40 CFR *PART* 136, the Regional Boards shall specify suitable analytical methods in waste discharge requirements. Acceptance of data should be predicated on demonstrated laboratory performance.

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*See Appendix I for definition of terms.

The State or Regional Board may, subject to EPA approval, specify test methods which are more sensitive than those specified in 40 CFR *PART* 136. Total chlorine residual is likely to be a method detection limit effluent limitation in many cases. The limit of detection of total chlorine residual in standard test methods is less than or equal to 20 mg/l.

Monitoring for the substances in Table B shall be required periodically. For discharges less than 1 MGD (million gallons per day), the monitoring of all the Table B parameters should consist of at least one complete scan of the Table B constituents one time in the life of the waste discharge requirements. For discharges between 1 and 10 MGD, the monitoring frequency shall be at least one complete scan of the Table B substances annually. Discharges greater than 10 MGD shall be required to monitor at least semiannually.

Chapter *III*. ~~IV.~~ Compliance with Toxicity ~~Limitations and~~ Objectives:

Compliance with the acute toxicity objective (TUa) in Table B shall be determined using an ~~established~~ *EPA approved* protocol~~, e.g., American Society for Testing Materials (ASTM), EPA, American Public Health Association, or State Board.~~ *as provided in 40 CFR PART 136.*

The Regional Board shall require the use of critical life stage toxicity tests specified in this Appendix to measure TUc. Other species or protocols will be added to the list after SWRCB review and approval. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Use of critical life stage bioassay testing shall be included in waste discharge requirements as a monitoring requirement for all discharges greater than 100 MGD by January 1, 1991 at the latest. For other major dischargers, critical life stage bioassay testing shall be included as a monitoring requirement one year before the waste discharge requirement is scheduled for renewal. ~~For major dischargers scheduled for waste discharge requirements renewal less than one year after the adoption of the toxicity objective, critical life stage bioassay testing shall be included as a monitoring requirement at the same time as the chronic toxicity effluent limits is established in the waste discharge requirements.~~

*See Appendix I for definition of terms.

The following tests shall be used to measure TUc. Other tests may be added to the list when approved by the State Board.

Species	Effect	Tier	Reference
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	1,3
red abalone, *Haliotis rufescens*	abnormal shell development	1	1,3
oyster, *Crassostrea gigas;* mussels, *Mytilus spp.*	abnormal shell development; percent survival	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	1,3
shrimp, *Holmesimysis costata*	percent survival; growth	1	1,3
shrimp, *Mysidopsis bahia*	percent survival; growth; fecundity	2	2,4
topsmelt, *Atherinops affinis*	larval growth rate; percent survival	1	1,3
silversides, *Menidia beryllina*	larval growth rate; percent survival	2	2,4

The first tier test methods are the preferred toxicity tests for compliance monitoring. A Regional Board can approve the use of a second tier test method for waste discharges if first tier organisms are not available.

*See Appendix I for definition of terms.

Protocol References

1. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms. U.S. EPA Report No. EPA/600/R-95/136.

2. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms. U.S. EPA Report No. EPA-600-4-91-003.

3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.

4. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

*See Appendix I for definition of terms.

APPENDIX V

PROCEDURES FOR THE NOMINATION AND DESIGNATION OF AREAS* OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS).

1. Any person may nominate areas of ocean waters for designation as ASBS* by the SWRCB. Nominations shall be made to the appropriate RWQCB and shall be accompanied by the following:

   (a) Information such as maps, reports, data, statements, photographs, etc. to show that:

      (1). Candidate areas are located in ocean waters as defined in the "Temperature Plan" and the "Ocean Plan".

      (2). Candidate areas are intrinsically valuable or have recognized value to man for scientific study, commercial use, recreational use, or esthetic reasons.

      (3). Candidate areas need protection beyond that offered by waste discharge restrictions or other administrative and statutory mechanisms.

2. A RWQCB may nominate a water for designation as an ASBS*. A RWQCB may develop the information in (a) (1), (2) and (3) above to support its nomination or invite other persons to provide or supplement such information during a public hearing.

3. A RWQCB may decide to (a) consider individual ASBS* nominations upon receipt, (b) consider several nominations in the same proceedings, or (c) consider any ASBS* nominations in the periodic update of its Basin Water Quality Control Plan (Basin Plan).

4. Any consideration of an ASBS* nomination shall satisfy the public participation requirements of Section 13244 CWC and 40 CFR 131.20(b).

5. Following consideration of an ASBS* nomination, the RWQCB shall forward its recommendation or amended Basin Water Quality Control Plan to the SWRCB.

6. The SWRCB may approve the RWQCB recommendation, or return it to the RWQCB for further consideration and resubmission to the SWRCB. Upon resubmission, the SWRCB

*See Appendix I for definition of terms.

may either approve or, after a public hearing in the affected region, revise and approve the RWQCB recommendation.

7. Upon approval of an ASBS* adoption action by the state Office of Administrative Law, implementation provisions of the California Ocean Plan and the appropriate Basin Plan shall be effective immediately. A record of the approval action will be forwarded to the U.S. EPA as an amendment to the California Ocean Plan and the appropriate Basin Plan.

8. SWRCB staff will advise other agencies to whom the list of designated areas is to be provided that the basis for this action by the SWRCB is limited to considerations related to protection of marine life from wastewater discharges.

*See Appendix I for definition of terms.

APPENDIX VI

PROCEDURES FOR THE NOMINATION AND DESIGNATION OF OUTSTANDING* NATIONAL RESOURCE WATERS AND OUTSTANDING* STATE RESOURCE WATERS.

1. Any person may nominate an area of ocean waters for designation as an ONRW* or an OSRW*. Nominations may be made to the SWRCB or to the appropriate RWQCB, and shall be accompanied by the following information:

   (a) Maps, reports, data, statements, photographs, etc. to show that:

      (1) The candidate area is within ocean waters as defined by the Ocean Plan,

      (2) The candidate area satisfies the definition of the designation sought,

      (3) It is in the public interest to provide the special water quality protection afforded by the designation rather than the protection afforded by waste discharge requirements.

2. During the (a) development of a water quality control plan, (b) consideration of a decision affecting water quality, or (c) consideration of a candidate ONRW* or OSRW*, a RWQCB or the SWRCB may determine that a water body, or portion thereof, satisfies the definition of an ONRW* or OSRW* and that the specific water deserves the protection afforded by the designation. If a specific designation is proposed, it shall be considered as an amendment to the appropriate water quality control plan.

3. Consideration of the designation of an ONRW* or OSRW* shall satisfy the public participation requirements for a water quality control plan amendment.

4. Upon approval of the designated ONRW* or OSRW* by the SWRCB and the state Office of Administrative Law, implementation provisions of the California Ocean Plan and the appropriate Basin Plan shall be effective immediately.

5. A record of the designation action and the water quality plan amendment shall be submitted to the U.S. EPA for approval.

*See Appendix I for definition of terms.

APPENDIX VII

AREAS* OF SPECIAL BIOLOGICAL SIGNIFICANCE, OUTSTANDING* NATIONAL RESOURCE WATERS AND OUTSTANDING* STATE RESOURCE WATERS
Designated By The
State Water Resources Control Board

A. AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE

Designated March 21, 1974, April 18, 1974, and June 19, 1975

1. Pygmy Forest Ecological Staircase
2. Del Mar Landing Ecological Reserve
3. Gerstle Cove
4. Bodega Marine Life Refuge
5. Kelp Beds at Saunders Reef
6. Kelp Beds at Trinidad Head
7. Kings Range National Conservation Area
8. Redwoods National Park
9. James V. Fitzgerald Marine Reserve
10. Farallon Island
11. Duxbury Reef Reserve and Extension
12. Point Reyes Headland Reserve and Extension
13. Double Point
14. Bird Rock
15. Ano Nuevo Point and Island
16. Point Lobos Ecological Reserve
17. San Miguel, Santa Rosa, and Santa Cruz Islands
18. Julia Pfeiffer Burns Underwater Park
19. Pacific Grove Marine Gardens Fish Refuge and Hopkins Marine Life Refuge
20. Ocean Area Surrounding the Mouth of Salmon Creek
21. San Nicolas Island and Begg Rock
22. Santa Barbara Island, Santa Barbara County and Anacapa Island
23. San Clemente Island
24. Mugu Lagoon to Latigo Point
25. Santa Catalina Island - Subarea One, Isthmus Cove to Catalina Head
26. Santa Catalina Island - Subarea Two, North End of Little Harbor to Ben Weston Point
27. Santa Catalina Island - Subarea Three, Farnsworth Bank Ecological Reserve
28. Santa Catalina Island - Subarea Four, Binnacle Rock to Jewfish Point
29. San Diego-La Jolla Ecological Reserve
30. Heisler Park Ecological Reserve

*See Appendix I for definition of terms.

31. San Diego Marine Life Refuge
32. Newport Beach Marine Life Refuge
33. Irvine Coast Marine Life Refuge
34. Carmel Bay

B. OUTSTANDING* NATIONAL RESOURCE WATERS

Designated

C. OUTSTANDING* STATE RESOURCE WATERS

Designated

*See Appendix I for definition of terms.

Appendix C
Environmental Checklist Form

ENVIRONMENTAL CHECKLIST

A. Background

1. Name of Proponent: State Water Resources Control Board
2. Address and Phone Number of Proponent: Division of Water Quality
   Frank Palmer, Chief(916) 657-0797
   Ocean Standards Unit
   P.O. Box 944213, Sacramento, CA 94244-2130
3. Date Checklist Submitted:
4. Agency Requiring Checklist: Resources Agency of California
5. Name of Proposal, if Applicable: Proposed amendments for the California Ocean Plan

B. Environmental Impacts
(Explanations are included in comments section immediately following Checklist).

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	LAND USE AND PLANNING.				
	Would the proposal:				
a.	Conflict with general plan designation or zoning?	[ ]	[ ]	[ ]	[X]
b.	Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	[ ]	[X]	[ ]	[ ]
c.	Be incompatible with existing land use in the vicinity?	[ ]	[X]	[ ]	[ ]
d.	Affect agriculture resources or operations (e.g. impacts to soils or farmlands or impacts from incompatible land uses)?	[ ]	[ ]	[ ]	[X]
e.	Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	[ ]	[X]	[ ]	[ ]
II.	POPULATION AND HOUSING.				
	Would the proposal:				
a.	Cumulatively exceed official regional or local population projections?	[ ]	[ ]	[ ]	[X]
b.	Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	[ ]	[ ]	[ ]	[X]
c.	Displace existing housing especially affordable housing?	[ ]	[ ]	[ ]	[X]

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	GEOLOGIC PROBLEMS				
	Would the proposal result in or expose people to potential impacts involving:				
a.	Fault rupture?	[ ]	[ ]	[ ]	[X]
b.	Seismic ground shaking?	[ ]	[ ]	[ ]	[X]
c.	Seismic ground failure, including liquefaction?	[ ]	[ ]	[ ]	[X]
d.	Seiche, tsunami, or volcanic hazard?	[ ]	[ ]	[ ]	[X]
e.	Landslides or mudflows?	[ ]	[ ]	[ ]	[X]
f.	Erosion, changes in topography or unstable soil conditions from excavation, grading or fill?	[ ]	[ ]	[ ]	[X]
g.	Subsidence of the land?	[ ]	[ ]	[ ]	[X]
h.	Expansive soils?	[ ]	[ ]	[ ]	[X]
i.	Unique geologic or physical features?	[ ]	[ ]	[ ]	[X]
IV.	WATER				
	Would the proposal result in:				
a.	Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	[ ]	[ ]	[ ]	[X]
b.	Exposure of people or property to water related hazards such as flooding?	[ ]	[ ]	[ ]	[X]
c.	Discharge into surface water or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	[ ]	[ ]	[ ]	[X]
d.	Changes in the amount of surface water in any water body?	[ ]	[ ]	[ ]	[X]
e.	Changes in currents or the course or direction of surface water movements?	[ ]	[ ]	[ ]	[X]
f.	Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of ground water recharge capability?	[ ]	[ ]	[ ]	[X]
g.	Altered direction or rate of flow of ground water?	[ ]	[ ]	[ ]	[X]
h.	Impacts to ground water quality?	[ ]	[ ]	[ ]	[X]
i.	Substantial reduction in the amount of ground water otherwise available for public water supplies?	[ ]	[ ]	[ ]	[X]

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	AIR QUALITY				
	Would the proposal:				
a.	Violate any air quality standard or contribute to an existing or projected air quality violation?	[ ]	[ ]	[ ]	[X]
b.	Expose sensitive receptors to pollutants?	[ ]	[ ]	[ ]	[X]
c.	Alter air movement, moisture, or temperature, or cause any change in climate?	[ ]	[ ]	[ ]	[X]
d.	Create objectionable odors?	[ ]	[ ]	[ ]	[X]
VI.	TRANSPORTATION/CIRCULATION				
	Would the proposal result in:				
a.	Increased vehicle trips or traffic congestion?	[ ]	[ ]	[ ]	[X]
b.	Hazards to safety from design features (e.g. farm equipment)?	[ ]	[ ]	[ ]	[X]
c.	Inadequate emergency access or access to nearby uses?	[ ]	[ ]	[ ]	[X]
d.	Insufficient parking capacity on- site or off-site?	[ ]	[ ]	[ ]	[X]
e.	Hazards or barriers for pedestrians or bicyclists?	[ ]	[ ]	[ ]	[X]
f.	Rail, waterborne or air traffic impacts?	[ ]	[ ]	[ ]	[X]
g.	Conflicts with adopted policies supporting transportation (e.g., bus turnouts, bicyclists racks)?	[ ]	[ ]	[ ]	[X]
VII.	BIOLOGICAL RESOURCES				
	Would the proposal result in impacts to:				
a.	Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	[ ]	[ ]	[ ]	[X]
b.	Locally designated species?	[ ]	[ ]	[ ]	[X]
c.	Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)?	[ ]	[ ]	[ ]	[X]
d.	Wetland habitat (e.g. marsh, riparian and vernal pool)?	[ ]	[ ]	[ ]	[X]
e.	Wildlife dispersal or migration corridors?	[ ]	[ ]	[ ]	[X]
VIII.	ENERGY AND MINERAL RESOURCES				
	Would the proposal:				
a.	Conflict with adopted energy conservation plans?	[ ]	[ ]	[ ]	[X]

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b.	Use non- renewable resources in a wasteful and inefficient manner?	[ ]	[ ]	[ ]	[X]
c.	Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	[ ]	[X]	[ ]	[ ]
IX.	HAZARDS				
Would the proposal involve:					
a.	A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?	[ ]	[ ]	[ ]	[X]
b.	Possible interference with an emergency response plan or emergency evacuation plan?	[ ]	[ ]	[ ]	[X]
c.	The creation of any health hazard or potential health hazard?	[ ]	[ ]	[ ]	[X]
d.	Exposure of people to existing sources of potential health hazards?	[ ]	[ ]	[ ]	[X]
e.	Increased fire hazard in areas with flammable brush, grass, or trees?	[ ]	[ ]	[ ]	[X]
X.	NOISE				
	Would the proposal result in:				
a.	Increases in existing noise levels?	[ ]	[ ]	[ ]	[X]
b.	Exposure of people to severe noise levels?	[ ]	[ ]	[ ]	[X]
XI.	PUBLIC SERVICES				
	Would the proposal have an effect upon or result in a need for new or altered government services in any of the following areas:				
a.	Fire protection?	[ ]	[ ]	[ ]	[X]
b.	Police protection?	[ ]	[ ]	[ ]	[X]
c.	Schools?	[ ]	[ ]	[ ]	[X]
d.	Maintenance of public facilities, including roads?	[ ]	[X]	[ ]	[ ]
e.	Other governmental services?	[ ]	[ ]	[ ]	[X]
XII.	UTILITIES AND SERVICE SYSTEMS				
	Would the proposal result in a need for new systems or supplies or substantial alterations to the following utilities:				
a.	Power or natural gas?	[ ]	[ ]	[ ]	[X]
b.	Communications systems?	[ ]	[ ]	[ ]	[X]

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c.	Local or regional water treatment or distribution facilities?	[ ]	[ ]	[ ]	[X]
d.	Sewer or septic tanks?	[ ]	[X]	[ ]	[ ]
e.	Storm water drainage?	[ ]	[X]	[ ]	[ ]
f.	Solid waste disposal?	[ ]	[X]	[ ]	[ ]
g.	Local or regional water supplies?	[ ]	[ ]	[ ]	[X]
XIII.	AESTHETICS				
	Would the proposal:				
a.	Affect a scenic vista or scenic highway?	[ ]	[ ]	[ ]	[X]
b.	Have a demonstrable negative aesthetic effect?	[ ]	[ ]	[ ]	[X]
c.	Create light or glare?	[ ]	[ ]	[ ]	[X]
XIV.	CULTURAL RESOURCES				
	Would the proposal:				
a.	Disturb paleontological resources?	[ ]	[ ]	[ ]	[X]
b.	Disturb archaeological resources?	[ ]	[ ]	[ ]	[X]
c.	Affect historical resources?	[ ]	[ ]	[ ]	[X]
d.	Have the potential to cause a physical change which would affect unique ethnic cultural values?	[ ]	[ ]	[ ]	[X]
e.	Restrict existing religious or sacred uses within the potential impact area?	[ ]	[ ]	[ ]	[X]
XV.	RECREATION				
	Would the proposal:				
a.	Increase the demand for neighborhood or regional parks or other recreational facilities?	[ ]	[ ]	[ ]	[X]
b.	Affect existing recreational opportunities?	[ ]	[ ]	[ ]	[X]
XVI.	MANDATORY FINDINGS OF SIGNIFICANCE				
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community. Reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	[ ]	[ ]	[ ]	[X]
b.	Does the project have the potential to achieve short- term, to the disadvantage or long- term, environmental goals?	[ ]	[ ]	[ ]	[X]

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	[ ]	[ ]	[ ]	[X]
d.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	[ ]	[ ]	[ ]	[X]

C. Determination

Based on the evaluation in FED (Environmental Effects Section), I find that the proposed amendments for the California Ocean Plan will not have a significant adverse effect on the environment.

Date 1998

Stan Martinson, Chief
Division of Water Quality
State Water Resources Control Board

ENVIRONMENTAL CHECKLIST

Proposed Amendment #1 proposes to replace the Acute Toxicity Effluent Limitations (ATEL) in Table A with an Acute Toxicity Water Quality Objective.

Amendment #2 proposes to revise 11 water quality objectives and adds one.

Amendment #3 revises the compliance determination section of the Ocean Plan.

Proposed Amendments #4 (Change of Plan Format), and #6 (Administrative changes to the Ocean Plan) do not meet the definition of a "Project" under CEQA. Amendments #4 and #6 are intended to clarify existing language and format of the Ocean Plan. Amendment #5 (Development of Special Protection for National Marine Sanctuaries), would include definitions, procedures and implementation measures for the designation of ASBS and ONRWs that would be based on existing state and federal law and federal guidance [see page X]. Amendment #5 includes the creation of a new class of protected water, the "OUTSTANDING STATE RESOURCE WATER" (OSRW), which is not included in existing state or federal laws, but is described in federal guidance documents, and has been approved in the water quality standards of several states.

Issue #5 does not require economic analysis for the creation of OSRWs at this preliminary stage, but it does require environmental analysis of potential impacts. The checklist comments in the following section pertain to Amendment #5 only.

General Description: If an area of the ocean waters under state jurisdiction is nominated as an Outstanding State Resource Water (OSRW), it could be considered for designation by a Regional Water Quality Control Board (RWQCB) or the State Water Resources Control Board (SWRCB). If the nominated area is designated by either board, new discharges of waste to the area would be prohibited, and new discharges outside of the area would have to be planned so the discharge would not lower water quality within the area. Existing waste discharges would be reviewed to determine if there is a reasonable potential for causing water quality within the designated area to be lowered. If not, the discharge could continue until the next scheduled review. If so, an

analysis would determine if reasonable measures could be imposed to ensure that water quality in the designated area would not be lowered. If no reasonable measures are found, options include phasing out the discharge, allowing the discharge to continue for some time under conditions, modifying the boundary of the OSRW, and rescinding the designation. There may be other options. Any decision to change the designation would require findings that the action was necessary to accommodate important economic or social development in the region or watershed in which the OSRW is located. The action would require review and approval by the U.S. EPA.

No OSRWs have been nominated and it is not known at this time when, and if, some may be nominated. If an OSRW is nominated, it may not be designated by the RWQCB or SWRCB considering the nomination. Therefore, it is too speculative at this time to define potential OSRW designations or environmental impacts.

B.1.b. Conceivably, an OSRW could be designated which has an existing discharge from a project utilizing a combination waste treatment lagoon and waterfowl habitat area. If it was found at some point in time that the project was causing, or had the potential to cause, a lowering of water quality within the OSRW, it is possible the project would have to be altered.

B.1.c. If land use plans included storm drains, watershed drainage projects or right-of-ways for projects that discharged into an OSRW, and there was a reasonable potential for the land use plans to cause water quality to be lowered in the OSRW, the plans could be found incompatible with the designation. However, if a RWQCB or the SWRCB is considering a nomination for an OSRW, it is assumed the environmental analysis would reveal any potential conflicts and mitigation measures. If an OSRW has been designated and another agency is considering land use plans which might conflict with the purposes of the OSRW, it is assumed also that the environmental analysis for the land use plan would reveal potential conflicts.

B.1.e. If an OSRW is designated and there is an established community which has a community waste disposal facility discharging into the OSRW, it is conceivable that the waste could be found to have a reasonable potential to lower water quality within the OSRW. A situation could exist in which the community would be required to construct collection facilities, or upgrade treatment works, or improve discharge facilities. If any of these measures were a reasonable solution but the community could not finance them, there could be a problem. However, it is possible that local districts could be formed and grants and/or loans could help finance the necessary project.

B.VIII.c. If an OSRW is designated, there could be a situation where undersea exploratory or production drilling for oil would conflict with the purposes of the OSRW. A determination would have to be made concerning potential impacts and mitigation measures with a specific designated area and a specific project proposal.

B.XI.d. If an OSRW is designated, nonpoint source waste discharges will have to be controlled to a reasonable extent to prevent a lowering of water quality within the OSRW. It is possible that road maintenance would have to be increased or improved to achieve appropriate "best

management practices" (BMPs). There could be situations where significant erosion from public lands, drainage courses or highway embankments would be found to be a threat to water quality in the OSRW and improvements would be required.

B.XII.d. As previously described in B.I.e., an existing municipal waste discharge into an OSRW may be found to have a reasonable potential for lowering water quality within the designated area. If so, the collection system, waste treatment facility or discharge facility may be required to change and cause secondary impacts. It is premature to attempt to define potential secondary impacts or mitigation measures at this time. However, the type of secondary impacts could be related to construction of collection systems, enlargement of treatment facilities, or extension or enlargement of waste discharge outfalls.

There may be watersheds tributary to coastal waters where septic tanks are not maintained adequately to prevent bacterial contamination of coastal waters, but the problem has not had sufficient priority to result in correction. If the coastal waters are designated as an OSRW, it may raise the priority for corrective measures required of septic tank owners.

B.XII.e. Existing storm water drainage into a designated OSRW may be found to have a potential for causing unacceptable changes in water quality or biological communities within the OSRW. Corrective measures could include new, more stringent, BMPs for asphalt surfaces, pesticide use, rubbish disposal, industrial yards, land surfaces and drainage ways.

B.XII.f. Solid waste disposal in the form of dredged material, or fill, may not be acceptable within a specific OSRW. However, there is provision for temporary, limited changes in water quality within a designated area, so a particular project could be approved under conditions required for the amount and type of material, the season and length of time of disposal, etc.

GENERAL CHECKLIST COMMENTS

I.a.,b.,c.,e.,d. Land use and planning (e.g., general plans and zoning) delineate those areas that will be developed, and the type and density of development to be allowed. The area affected by this project includes only coastal and ocean waters of California. There is nothing in the proposed amendments that requires property to be used in any way or prohibits property uses.

II.a.,b.,c.;XV.a. Proposed amendments are not expected to cause Growth-Inducing Impacts.

III.a.,b.,d. These geologic actions are not caused by water pollution. However, people could potentially be exposed to such impacts during the construction or operation of new facilities to treat water pollution. Proposed amendments are not expected to cause construction or operation impacts.

III.c. Liquefaction occurs in the subsurface when the mechanical behavior of a granular material is transformed from a solid state to a liquid state due to loss of grain-to-grain contact during earthquake shaking. It occurs most often in areas underlain by saturated, unconsolidated sediments. Seismic ground failure is not caused or affected by water pollution.

III.a.,b.,d.,e.,f.,g.,i.;V.d.;VI.a.,b.,c.,d.,e.,f.,g.;VIII.a.,b.;IX.a.,b.,e.;X.a.,b.;XI.a.,b.,c.,d.,e.;XII.a.,b., f.;

XIII.a.,b.,c.;XIV.a.,b.,c.,d.,e. Exposure of people to geologic actions, landslides, erosion, impacts to transportation systems, energy impacts, odors, impacts to public services and utilities, impacts to wildlife areas, and impacts to aesthetics or cultural resources could occur during the construction or operation of new facilities to treat water pollution. Proposed amendments are not expected to cause the construction or operation of new facilities.

III.h. Expansion of soils is influenced by amount of moisture change and the type of soil (the amount of clay in the soil, and the type of minerals in the clay). Shrink-swell is measured by the volume change in the soil. Water pollutants do not significantly affect the shrink-swell capacity of soils. The proposed amendments are not expected to affect soils.

IV.a.,b.,d.,e.,f.,g.,i. Proposed amendments to the Ocean Plan are not expected to affect Levels of toxic substances do not affect absorption rates, drainage patterns, surface runoff, flooding, quantity of surface or ground water, surface water currents, or ground water flow or supply.

IV.c. Concerning Amendment #1 , the new water quality-based acute toxicity objective is expected to provide procedures that would serve to better protect ocean waters for identified beneficial uses by more accurately assessing aquatic community responses to ocean waste discharges. For Amendment #2, the new water quality objectives are expected to provide increased protection to marine waters. Amendment #3 is not expected to change existing protections for marine waters. (See pg. X).

IV.h.;V.a.,b. The proposed amendments are not expected to adversely affect ground water or air quality.

V.c. Proposed amendments to the Ocean Plan are not expected to significantly affect temperature, humidity, precipitation, winds, cloudiness, or other atmospheric conditions.

VII.a.,b.,c.,d.,e.;XVI.a. The proposed amendments are not expected to cause any significant adverse effects to plants and animals, including rare, threatened, or endangered species. Regarding Amendment #1, (the ATEL amendment), the proposed changes will serve to better protect ocean waters for identified beneficial uses because the new water quality-based acute toxicity objective will more accurately assess aquatic community response to ocean waste discharges (See pg. X). Additionally, Amendments #2 is expected to provide increased protections to marine communities. Amendment #3 (Compliance Determination) is expected to leave current protections for marine communities unchanged.

VIII.c. The proposed amendments do not involve or affect the mining of mineral resources.

IX.c.,d.;XVI.d. The proposed Ocean Plan amendments are not expected to cause adverse effects to human health (See pg. X).

XII.c.,d.,e.,g. Effects on water utility and service systems could potentially occur if the proposed Amendments would cause dischargers to have to take compliance actions that involved construction or substantial alterations to treatment facilities. However, proposed amendments are not expected to require dischargers to take such compliance actions. For Amendment #1, based on a survey of waste dischargers and private laboratories potentially affected by this proposed amendment, one of eight respondents surveyed indicated potential one-time costs to dilute effluent for toxicity testing for the purchase of a diluter, at between $5,000 to $10,000.00. For Issues #2 and #3, no effects on water utility in service systems expected.

XV.b. Toxic pollutants in water and sediment can affect recreational opportunities such as swimming if water quality criteria/objectives are not achieved in a water body.

Appendix D
1992 Triennial Review Workplan

California Ocean Plan
1992 Triennial Review Workplan
(As Adopted October 22, 1992)

A. HIGHER PRIORITY ISSUES

1. Water Quality Objectives and Regulatory Implementation

    a. Applicability of the Ocean Plan to water quality certification and waste discharge requirements for dredging activity.
    b. Review of water quality objectives in Table B.
    c. Review of the water quality objectives for 2,3,7,8-TCDD and related compounds.
    d. Biological objectives.
    e. Mass emission regulation.
    f. Regional monitoring and standardized monitoring and reporting procedures.
    g. Compliance determination for chemical objectives.
    h. National Marine Sanctuaries and marine laboratories.
    i. Storm water discharge control.
    j. Application of Ocean Plan water quality objectives to potential adverse effects of waste discharges associated with the desalination of ocean waters.

2. Toxicity Objectives and Regulatory Implementation

    a. Chronic toxicity testing: use of non-native species.
    b. Chronic toxicity testing: review of test protocol list.
    c. Statistical interpretation of chronic toxicity data.
    d. Chronic toxicity testing: standardized reporting requirements.
    e. Implementation of toxicity reduction evaluations (TREs).
    f. Acute Toxicity: (1) test methods, and (2) acute toxicity requirements in Table A.

3. Bacterial Standards

    a. Choice of indicator organisms for water contact bacterial standard and increased stringency of the water contact fecal coliform standard.
    b. Establish a fecal coliform standard for shellfish harvesting areas and for shellfish tissues.

4. Format and Terminology

    a. Mariculture
    b. Clarification of terminology
    c. Format and organization of the Plan

5. Sediment Quality Objectives
6. Suspended Solids Regulation
7. Nonpoint Source Control

B. LOWER PRIORITY ISSUES

8. Clarification of Natural Light Requirements
9. Establishing the Desalination of Marine Water for Fresh Water Production as a Designated Beneficial Use
10. Extension of the Boundary for Water-Contact Zone
11. Restriction on Application of Dilution Factors in Nearshore Waters
12. Ambient Toxicity Monitoring
13. Application of Bacterial Standard to Non-Contact Recreational Areas
14. Reexamine Table C Background Concentrations
15. Areas of Special Biological Significance
16. Incorporation of Site-Specific Water Quality Objectives in the Plan
17. Adoption of an Effluent Limitation for BOD

C. ISSUE INAPPROPRIATE FOR CONSIDERATION

18. Guidelines for Regional Board Permit Limits That Are More Stringent Than Those Derived from Ocean Plan Methods

Appendix E
List of Preparers

LIST OF PREPARERS

This Functional Equivalent Document was prepared by the following staff members at the State Water Resources Control Board:

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