

STATE OF CALIFORNIA



(STATE SEAL)

WATER QUALITY STANDARDS SUMMARY



DECEMBER, 1970

ENVIRONMENTAL
PROTECTION
AGENCYCALIFORNIA STATE WATER
RESOURCES CONTROL BOARD

FEDERAL WATER QUALITY ADMINISTRATION

CALIFORNIA WATER QUALITY STANDARDS, A SUMMARY

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PREFACE & INTRODUCTION

PREFACE

The information contained herein has been condensed from (a) 32 separate policies (1) (standards) adopted by California's nine Regional Water Quality Control Boards, and approved by the Secretary of the Interior, (b) a Statewide Policy for the Control of Water Quality adopted by the State Water Quality Control Board (now the State Water Resources Control Board) and contained in a document of associated material submitted to the Secretary of the Interior on June 23, 1967, and (c) supplemental submittal of standards changes.

The State Board adopted Statewide policies, (Resolutions 67-36 through 67-41), which are applicable to each of the 32 ^{policies} standards adopted by the Regional Boards.

A summarization of this type, of necessity, omits many pertinent details. The complete standards should be referred to for more detailed information.

The equivalence in Federal and State terminology is as follows:

<u>Federal</u>	<u>State</u>
Criteria	= Objectives
Water Quality Standards	= Water Quality Control Policies
Plans to Implement and Enforce	= Measures to Achieve Objectives

SUMMARY OF WATER QUALITY STANDARDS
FOR
INTERSTATE AND COASTAL WATERS OF CALIFORNIA

Introduction

In the Water Quality Act of 1965, Congress authorized the establishment of water quality standards for interstate (including coastal) waters. The purpose of these standards is to protect and enhance the quality and productivity of the Nation's interstate waters to serve a variety of beneficial uses, such as public water supply, recreation and protection of aquatic life, and industrial and agricultural uses. This publication summarizes the standards for the general information of the American public and Federal, State and local officials as to the uses and associated requirements for interstate waterways.

The Act, which amended the Federal Water Pollution Control Act, provided for the States to have the first opportunity to establish standards for their interstate waters, which were then subject to review and approval by the Secretary of the Interior. All of the States, the District of Columbia and the Territories of Guam, Puerto Rico and the Virgin Islands participated in this landmark effort to set standards.

In the course of establishing the standards, public hearings were held by the States and other jurisdictions noted above to give the public an opportunity to participate in setting water quality objectives and standards.

California adopted standards (1) for its significant interstate waters by June 14, 1967, which were then submitted to the Department of the Interior.

EXCEPTIONS

Subsequently, certain revisions were made by the State in the original standards including adoption of a policy to protect high quality waters, and the Secretary of the Interior approved the standards, as revised, on January 9, 1969, with the following exceptions and conditions.

Excepted From Approval

1. Water Quality Control Policy for harbors, ^Hmarinas, and ^Ttidal ^Pprisms of Los Angeles and Ventura Counties.

2. Water quality objectives for temperatures in all policies otherwise approved.

3. The minimum dissolved oxygen limit of 4.5 mg/l for the nearshore waters of the Santa Ana Region.

Additional Actions Recommended by ^{the} Secretary of the Interior

1. Additional actions were recommended to further upgrade salinity standards for the Sacramento - San Joaquin Delta area.

2. Development of a detailed implementation plan for improved waste treatment and control of waste in the San Francisco Bay Area.

3. A revision of the State's waste treatment policies to conform to the State's adopted non-degradation policy with review and modification of waste discharge requirements where appropriate.

4. The establishment of numerical bacteriological objectives for the Smith, Klamath, and Colorado Rivers, Lake Topaz, and the interstate streams of the Lahontan Region.

5. The establishment of bacteriological objectives to protect sport fishing, boating, and other secondary contact recreational uses in certain tidal waters.

6. The development of standards for the Lost River and minor interstate streams of the Lahonton Region.

7. The upgrading of standards for the New and Alamo Rivers when Mexico has corrected the discharge of untreated wastes into New River by the town of Mexicali.

The items excepted for approval and those for which additional action was recommended are currently being studied by State and various State Agencies and by Federal water pollution control officials, and being subjected to public hearings and action by Regional water quality boards, with a view toward revisions of the State-adopted standards which will more adequately meet the intent of the Federal Act by June 1970.

The approved standards are thus both State and Federal standards, enforceable under the State water pollution control statutes and the Federal Water Pollution Control Act, as amended (Section 10). The waters for which standards were adopted are shown on the map in Figure 1.

The standards consist of three major components: designation of the uses which interstate waters are to serve, specification of narrative and numerical criteria to protect and enhance water quality, and specification of a plan of implementation and enforcement, which includes treatment and control requirements for municipal, industrial and other waste^s discharged to or affecting interstate waters. These components are discussed in the following sections; all three are essential to a complete standards program.

The standards are now being implemented. However, there will be continuing research on water quality requirements for various beneficial uses and improved

WATER USES, GENERAL

collection and evaluation of water quality data. As more information becomes available and experience with implementing the standards is gained, the standards will be refined and improved to reflect this new knowledge.

Should more detailed information be required on any aspect of the standards, it may be obtained from the State Water Resources Control Board, State of California, in Sacramento, California, or the Federal Water Pollution Control Administration Regional Office in San Francisco, California.

California has also established water quality standards for many of its intrastate waters, and information on these standards may also be obtained from the State Water Resources Control Board. The addresses of these offices are given on page No

Water Uses

The State of California designates the following uses to be protected in various interstate waters:

Municipal and Domestic Water Supply

Agricultural Water Supply:

- Livestock Watering
- Irrigation

Industrial Water Supply:

- Power Generation
- Processing
- Boiler Water
- Rinsing
- Cooling

Natural Resources:

- Propagation, Sustenance and Harvest of Fish and Aquatic Life
- Wildlife (including shore birds)

Primary Water Contact Recreation Uses:

Swimming or wading
Water Skiing
Surfing
Skin Diving

Military Exercises ^{SP}

General Water-Oriented Recreation (Other than Primary-Contact):

Sport Fishing (from boats, bank, stream or surf)
Sport Boating, cruising or sailing
Tidepool and marine life study
Beachcombing and hiking
Beach recreation
Shellfish gathering
Sun bathing
Picnicing
Camping
Hunting

Esthetic and Scenic Enjoyment

Scientific, Research, and Educational Uses

Commercial Shellfish Propagation & Harvesting

Commercial Fishing and Baitfishing

Fish Unloading and Processing

Marinas and Small Boat Harbors

Navigation

The general aim in designating uses for particular interstate waters is to recognize ^{past} present uses and practicable future uses, to provide where possible for a variety of uses, and to assure compatibility of standards with Federal, State and local resource planning. In order to satisfy the intent of the Federal Water Pollution Control Act to enhance water quality, the standards specifically provide that no interstate waters may be used solely or primarily for waste assimilation.

All interstate waters must be aesthetically pleasing, and this quality is usually protected by narrative criteria preventing unsightly or obnoxious conditions, such as floating debris, oil slicks, unpleasant odors, and colors.

Specific use designations for all interstate waters covered by the standards are provided in Table 1.

WATER QUALITY CRITERIA

Water Quality Criteria

The protection of water quality and uses requires the establishment of numerical and narrative limits on pollutants which damage these uses. The water quality criteria in this section reflect the best scientific judgement available as to the water quality requirements for the assigned uses. Numerical criteria are used wherever it is reasonable to do so. However, Narrative criteria are also necessary in some cases, particularly with respect to aesthetic considerations.

Some interstate waters have a higher quality than the minimum levels assigned for protection of water uses, and the standards seek to protect this higher quality as much as possible in the face of increasing social and economic development. Scientific knowledge about the exact water quality requirements for uses is limited, and by preventing degradation of high quality waters, the standards seek to assure optimum, not marginal, conditions to protect the uses associated with clean waters.

Table 1 shows the water quality criteria for each use protected by the California standards. In addition, the standards contain general narrative criteria, including a statement on controlling degradation of high quality waters, which are described. The standards provide for the protection of many small ephemeral interstate streams which are not now covered by specific use designations and criteria. The activities of man have now little, if any, impact on the natural quality of waters in these latter streams and the State has declared a policy to maintain their present high quality and the establish specific use designations and criteria as the need arises.

IMPLEMENTATION PLAN

Implementation Plan

The "action" plan of the standards is the plan of implementation and enforcement. This plan sets forth the requirements for treatment and/or control of significant municipal and industrial waste discharges in the State which affect interstate waters, specifies the time within which this is to be accomplished, and contains programs for dealing with other water pollution control problems.

The California State Water Resources Control Board was established by the 1967 Legislature (Stats. 1967, Chap. 284). The Board succeeded to the functions of the former State Water Rights Board and the State Water Quality Control Board, which were abolished. Water Pollution and water quality are now taken into account in conjunction with availability of unappropriated water whenever applications for appropriation of water are considered.

The State is divided into nine regions, each with a regional board composed of nine members appointed by the Governor for terms of four years. The boards are authorized to adopt regional water quality control plans, prescribe waste discharge requirements, and perform other functions concerning water quality control matters in their respective regions, subject to State Board review or approval. There are dissimilarities among the nine regional organizations. The principal reasons for the differences are: 1) the particular problems of a region; 2) the preference of the board for a particular organizational structure; and 3) the size of the regional board's staff. However, since the responsibilities of the regional boards are the same, their methods of accomplishing program goals are similar.

In general, the standards of California call for the best practicable treatment for all discharges. State statutes prohibit specifying type or degree of treatment or minimum treatment that must be provided. Control is obtained through establishing waste discharge or receiving water requirements. On a case-by-case basis the effect of each discharge on the quality and beneficial uses of the particular receiving water is reviewed by the Regional Water Quality Board in which the receiving water is located. This board then establishes either, or both, the discharge or receiving water requirement. It is the responsibility of the discharger to provide the treatment or control to meet the specified requirement.

The foregoing described procedure has resulted in the prohibiting of all discharges to many streams and confined bodies of water, to the export of all effluent out of a basin, to determinations that even tertiary treatment is inadequate, or to less restrictive treatment measures coupled with special discharge facilities or locations.

The State policy is to pay particular attention to confined or semi-confined bodies of water and to review all discharge requirements periodically to upgrade these with changing uses or water quality conditions. All discharges for which requirements have been established are to be in compliance by 1972. However, the majority have mandatory compliance dates of 1970. Information on the requirements of any particular discharger may be obtained from the State Water Resources Control Board, Sacramento, California.

GLOSSARY OF TERMS

1. Ambient Receiving Water Temperature - The existing temperature of the receiving water as determined by measurements at locations, depths, and times which represent conditions unaffected by the elevated temperature waste discharge under consideration.
2. Bacteria - For many years the best indicator of the sanitary quality of water has been an estimate of the density of coliform bacteria. More recently, tests have been developed for the determination of fecal coliform and fecal streptococci, which give a better indication of the concentration of bacteria in waters which may be harmful to human health. Bacterial concentrations originate primarily from municipal waste treatment plants, sanitary sewers, storm drains, vessels and agricultural wastes.
3. Beneficial uses - Of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; esthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
4. Biochemical Oxygen Demand (BOD) - The quantity of oxygen utilized in the biochemical oxidation of organic matter in a specified time and at a specified temperature. Waste discharges containing high levels of BOD will deplete oxygen supplies in receiving waters.

5. Coastal Waters - Waters of the Pacific Ocean other than enclosed bays and estuaries which are within the territorial limits of California.
6. Contamination - Means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.
7. Disinfection - The killing of the larger portion (but not necessarily all) of the harmful and objectionable microorganisms in, or on, a medium by means of chemicals, heat, ultraviolet light, etc. Chlorination is the method commonly employed in sewage treatment processes.
8. Dissolved Oxygen (D.O.) - The oxygen dissolved as a gas in sewage, water or other liquid usually expressed in milligrams per liter (mg/l), parts per million (ppm) or percent saturation. Adequate dissolved oxygen levels are necessary in waters to protect fish and other aquatic life and to prevent offensive odors. Low dissolved oxygen concentrations are generally due to excessive organic solids discharged as a result of inadequately treated waste (having high BOD). Excessive algal growths may cause vastly fluctuating dissolved oxygen levels, and other factors such as temperature and water movement also have an impact on dissolved oxygen levels.
9. Enclosed Bays - Indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays will 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 the following: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Carmel Bay, Morro Bay, Los Angeles Harbor, San Diego Bay.

10. Estuaries and Coastal Lagoons - Waters at the mouths of streams which serve as mixing zones for fresh and ocean water. 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 saltwater occurs in the open coastal waters. This definition includes but is not limited to the following: Smith River, Klamath River, Mad River, Eel River, Noyo River, Russian River, Sacramento River Downstream to Carquinez Bridge, Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code.

11. Interstate Waters - Under the Federal Water Pollution Control Act, interstate waters are defined as:

- a. ^R rivers, lakes and other waters which flow across or form a part of State or international boundaries;
- b. ^W waters of the Great Lakes;
- c. ^C coastal waters--whose scope has been defined to include ocean waters seaward to the territorial limits and waters along the coastline (including inland streams) that are influenced by the rise and fall of the tide.

12. pH - The index of hydrogen ion activity, used as an indication of acid or alkalinity in water. The pH of most waters ranges from 6.5 to 8.5, and most uses of water such as aquatic life propagation, prosper at these levels. In most cases, a pH outside this range is due to discharge of industrial wastes or decaying organic vegetation.
13. Pollution - The addition of sewage, industrial wastes or other harmful or objectionable material to water at a concentration or in sufficient quantity to result in measurable degradation of water quality.
14. Primary and Secondary Contact Recreation - Also called Whole-body Contact Recreation, Primary Contact Recreation includes uses of water such as swimming, water skiing and skin diving. Secondary Contact Recreation, also called Partial-body Contact Recreation, includes such recreational uses as boating and fishing.
15. Primary Treatment - May be defined as that process or group of processes capable of removing a high percentage of floating and settleable solids. This is the first major treatment in a sewage treatment works, and generally removes from 30 to 65 percent of the suspended solids and 30 to 40 percent of the 5-day biochemical oxygen demand.
16. Regional Board - Means any California Regional Water Quality Control Board for a region as specified in Section 13200 (Porter-Cologne Water Quality Control Act).

17. Secondary Treatment - May be defined as that process or group of processes capable of removing virtually all floating and settleable solids, generally from 80 to 95 percent of the 5-day biochemical oxygen demand, and a similar level of removal of suspended solids in untreated waste. The equivalent treatment may generally be defined as that process or group of processes achieving maximum practicable removal of solids, oils, grease, acids, alkalis, toxic materials, bacteria, taste and odor causing materials, color and any other objectionable constituents contained in untreated waste to produce an effluent equivalent to that obtained from secondary treatment of sewage or the effluent from the most efficient treatment facilities in current use for any specific category of industrial waste.
18. Sewage - (1) The water supply of a community after it has been used and discharged into a sewer, (2) wastewater from the sanitary conveniences of dwellings, business buildings, factories and other institutions.
19. Sewage, Combined - A sewage containing both sanitary sewage and surface or storm water with or without industrial wastes.
20. Sewer, Combined - A sewer which carries both sanitary sewage and storm drainage. At times of heavy rainfall, the capacity of combined sewers may be exceeded and sewers will overflow. The overflow will bypass the sewage treatment plant and the combined wastewaters will be discharged directly into streams without treatment of any kind. This is a problem in many older cities in the United States, and there are various programs to deal with it.

21. Solids, Settleable - Suspended solids which will subside in quiescent water, sewage or other liquid in a reasonable period.
22. Solids, suspended - Solids that either float on the surface of, or are in suspension in, water, sewage or other liquids and which are largely removable by laboratory filtering.
23. State Board - Means the State Water Resources Control Board.
24. Temperature - Extreme temperatures primarily affect the aquatic life use of waters. While temperature is affected by natural conditions, man has a significant effect by the construction and operation of dams and the discharge of cooling waters from industrial processes, particularly power.
25. Toxic Materials - These may include hundreds of compounds present in waters due to industrial wastes, runoff from farm lands where pesticides have been applied and other causes which are harmful to human, plant, animal and aquatic life.
26. Quality of the water or quality of the waters - Refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.
27. Water quality objectives - Means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.
28. Water quality control - Means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

29. Water quality control plan - Consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives.
30. Warm- and Cold-water Fish - Warm-water fish include black bass, sunfish, catfish, gar and others; cold-water fish include salmon and trout, whitefish, miller's thumb and blackfish. The temperature factor determining distribution is set by adaptation of the eggs to warm or cold water.

NORTH COASTAL
REGION

North Coastal Region - 1

The water quality objectives described herein apply to the North Coastal waters in California. For purposes of these policies, North Coastal waters include:

1. Lost River in California includes:
 - a. That portion of the (Upper) Lost River from its origin in Clear Lake Reservoir and extending downstream in a northwesterly direction to the Oregon State boundary.
 - b. That portion of the (Lower) Lost River which extends southerly from the Oregon State boundary into California and terminates in the Tule Lake Sump.
 - c. The waters of Upper and Lower Tule Lake Sump.
 - d. The waters of the Lower Klamath Lake Sump.
2. Smith River waters include:
 - a. The portion of the North Fork of the Smith River extending southerly from the Oregon-California boundary.
 - b. The middle and south forks of the Smith River.
 - c. The mainstem Smith River downstream to the Highway 101 crossing.
3. Main stem of the Klamath River in California from the Oregon border to the Community of Klamath Glen, approximately six miles upstream of the river mouth. The estuarine portion of the river, which is influenced by tidal waters, and the principal upstream tributaries, are to be treated in subsequent policy statements by this Board. Obviously, the inter-relationship of water quality in the mainstem Klamath River and its tributary streams will be reflected in these subsequent policy

statements on such tributaries as the Trinity, Shasta, Salmon and Scott Rivers.

4. Humboldt - Del Norte Coastal Waters include:

- a. Del Norte County coastline beginning at the Oregon-California boundary, and extending to the Humboldt-Del Norte County boundary;
- b. Humboldt County coastline beginning at the Humboldt-Del Norte County boundary, and extending to the Humboldt-Mendocino County boundary;
- c. Mouth of Smith River, upstream to the U.S. Highway 101 bridge crossing;
- d. Mouth of Klamath River, upstream to the vicinity of Klamath Glen;
- e. Mouth of Redwood Creek, upstream to the Section 23-33 boundary;
- f. Freshwater, stone, and Big Lagoons;
- g. Mouth of Little River, upstream to the Section 6-7 boundary;
- h. Mouth of Mad River, upstream to the U. S. Highway 101 bridge crossing;
- i. Mouth of Eel River, upstream to the Fernbridge bridge crossing;
- j. Mouth of Bear River, upstream to the Section 16-21 boundary; and
- k. Mouth of Mattole River, upstream to the confluence of the North Fork.

5. Humboldt Bay basin waters include: The Humboldt Bay system (i.e. Humboldt Bay, Arcata Bay, and South Bay) and all tributary streams and sloughs.

6. Mendocino County coastal waters, including: Ocean waters along the Mendocino County coast; and the estuarine portions of the mouths of the Ten Mile, Noyo, Big, Albion, Navarro, and Garcia rivers. The mouths of the streams in the policy area include the marine waters and upstream zones of marine water incursion.
7. The portions of the Sonoma and Marin County coastline to which this water quality control policy applies includes:
 - a. All of the Sonoma County coastline beginning at the Sonoma-Mendocino County boundary, and extending south to the Sonoma-Marin County boundary.
 - b. The Marin County coastline extending from the Sonoma-Marin County boundary at Estero Americano southerly to a centerline at the mouth of Tomales Bay.
 - c. The easterly half of Tomales Bay, including the tidal estuaries of those tributary streams entering the east side of the Bay north of Papermill Creek.
 - d. The mouth of the Gualala River upstream to the Highway 1 bridge crossing.
 - e. The mouth of the Russian River extending upstream to Duncans Mills at a point where the River crosses the boundary between Sections 14 and 15.
 - f. The mouth of Salmon Creek upstream to the Highway 1 bridge crossing.
 - g. Bodega Bay and Bodega Harbor.
 - h. The mouth of Estero Americano inland to the boundary between Sections 4 and 5.

North Coastal Region I

A. Organisms of the Coliform Group:

1. The bacteriological quality of the Smith River and Klamath River waters shall be maintained at levels deemed appropriate by State and local health authorities to protect the public health and to assure their continued suitability for water contact recreation and domestic water supply.
2. Bacteriological quality in the Lost River Waters, as it may be affected by the discharge of treated domestic sewage, shall be maintained at levels deemed appropriate by State and local health authorities to protect the public health and insure safe public water contact. Where sanitary survey information indicates that the public could reasonably be expected to come in contact with domestic sewage effluent which directly or indirectly reaches the waters of the Lost River system, such sewage effluent shall have been so disinfected that, at some point in the treatment process, the median most probably number of coliform organisms of human origin shall not exceed 100 per 100 ml.
3. In areas (North Coastal Ocean & Tidal Waters) where shellfish are harvested for human consumption, the median most probable number of coliform organisms (MPN) in the overlying waters shall not exceed 70 per 100 ml, and not more than 10% of the samples shall exceed an MPN of 330 per 100 ml where the three tube decimal dilution test is used.

4. In areas where coastal waters are used without treatment for the washing or processing of whole fish products, the maximum MPN of coliform organisms shall not exceed 700 per 100 ml in more than 20% of the samples; nor shall it exceed 700 per 100 ml in more than 5% of the samples where such waters are used in the processing of cut fish products.

5. In all other areas not included in (a) or (b) above where human contact can be anticipated, the MPN shall not exceed 1000 per 100 ml (10 per ml); provided that not more than 20% of the samples at any point, in any 30-day period, may exceed 1000 per 100 ml, and provided further that no single sample when verified by a repeat sample in 48 hours shall exceed 10,000 per 100 ml.

B. Dissolved Oxygen

1. The dissolved oxygen content in the Smith River and Klamath River waters shall not be depressed below 7.0 mg/l.

2. The dissolved oxygen content in that portion of the Lost River between Clear Lake and the California - Oregon border shall not be depressed below 5.0 mg/l. In the lower portion of the Lost River downstream from Hatfield, in the Tule Lake Sump, and in the Lower Klamath Lake Sump, the dissolved oxygen shall not be depressed below 3.0 mg/l.

3. The average annual dissolved oxygen content in the Humboldt Bay waters shall not be less than 7.0 mg/l, and no single value shall be less than 6.0 mg/l.

4. The average annual dissolved oxygen content in the Humboldt - Del Norte coastal waters, Mendocino Coastal waters, and Sonoma - Marin Coastal waters shall not be less than 6.0 mg/l, and no single value shall be less than 5.0 mg/l.

C. Hydrogen Ion Concentration as pH

1. Smith River: 6.5 - 8.5
2. Klamath River: 7.0 - 8.5
3. Lost River: 7.0 - 9.0
4. Humboldt Bay: Natural background to 8.5
5. Coastal waters: Natural background to 8.5

D. Mineral Content

1. Smith River: \bar{X} annual ≤ 150 umhos; max. ≤ 200 umhos
2. Klamath River: a) \bar{X} annual ≤ 300 umhos; max. ≤ 400 umhos (above Salmon River)
b) \bar{X} annual ≤ 200 umhos; max. ≤ 300 umhos (below Salmon River)
3. Lost River: \bar{X} annual ≤ 850 umhos; max. ≤ 1000 umhos (at outlet Klamath Straits Drain)
4. No objectives for Humboldt Bay or Coastal waters.

E. Dissolved Nutrients

1. Klamath River: Concentrations of dissolved nutrients shall be maintained at levels below those which cause undesirable algal blooms, slime or bacterial growth, or other undesirable biological growths.
2. Smith River: Included under "toxic or other deleterious substances."
3. Lost River: Concentrations of nutrients (such as nitrogen and phosphorus) shall be maintained at levels below those which cause

objectionable algal blooms, slime or bacterial growth, odors, or toxic biological growths which could be damaging to wildlife or other beneficial uses to be protected in policy waters.

F. Toxic or Other Deleterious Substances

1. Smith River: There shall be no organic or inorganic substances in concentrations which are toxic or detrimental to human, animal, plant or aquatic life, which impart undesirable tastes or odors to species of fish life, or which cause undesirable algal blooms, slime or bacterial growth, or other undesirable biological growths.
2. Klamath River: Identical, in meaning, to above.
3. Lost River: Identical to above. In addition to above objective, wastes from manufacturing, agricultural handling, processing, or tank cleaning operations -- which may reasonably be expected to contain pesticides or biocides -- shall not be discharged to policy waters.
4. Humboldt Bay: Identical to Smith & Klamath River.
5. Humboldt - Del Norte: Identical to Smith and Klamath River
6. Mendocino Coast: Identical to Smith & Klamath River
7. Sonoma - Marin Coast: Identical to Smith & Klamath River

G. Debris and Miscellaneous Floatable or Settleable Materials

1. The Smith River, Klamath River, Lost River, Humboldt Bay, Humboldt - Del Norte Coast, Mendocino Coast, and Sonoma - Marin Coastal waters have identical statements:

Settleable solids and such floating or settleable materials as: garbage, refuse, debris from logging or road construction, visible evidence of domestic sewage or petroleum products, or any other material which could adversely affect water quality for protected beneficial uses - shall not be discharged or left along the shoreline where it could be expected to be carried or washed into the forementioned waters.

H. Turbidity

1. Smith River: Turbidity shall not be increased to a degree which degrades water quality for protected beneficial uses. Insofar as it may be caused by the discharge of turbidity-inducing materials: Turbidity shall not be increased by more than 5 JTU (Jackson Turbidity Units) when the extent of background turbidity ranges between 0 and 50 units; 10 JTU when the background turbidity ranges between 50 and 100 units; and 20 percent when the background turbidity exceeds 100 JTU. The point(s) of measurement to determine conformance with the intent of this objective and with the prescribed numerical limitations shall be determined on a case-by-case basis by the North Coastal Regional Water Quality Control Board.
2. Klamath River: Objective is the same as Smith River with one exception. Turbidity shall not be increased more than 10 percent when the background turbidity exceeds 100 JTU.

3. Lost River, Humboldt Bay, Humboldt - Del Norte Coast, Mendocino Coast, Sonoma - Marin Coast: Turbidity shall not be significantly increased above natural background levels, nor to a degree which has an adverse effect on aquatic life or the aquatic habitat, or degrades water quality for any protected beneficial use.

I. Temperature

1. Smith River: Water temperatures shall not be elevated above the following levels:

September 1 - October 31	60°F
November 1 - May 31	55°F
June 1 - 30	60°F
July 1 - August 31	70°F

2. Klamath River: Water temperatures shall not be elevated above the following levels:

October 1 - 31	60°F
November 1 - May 31	55°F
June 1 - 30	65°F
July 1 - August 31	70°F
September 1 - 30	65°F

3. Lost River, Humboldt Bay, Humboldt - Del Norte Coast, Mendocino Coast, and Sonoma - Marin Coastal ^Waters: Water temperature shall not be significantly increased above natural background levels, nor altered to a degree which creates an adverse effect on aquatic life or its habitat.

J. Radioactivity

1. Smith River, Klamath River, Humboldt Bay, Humboldt - Del Norte Coast, Mendocino Coast, and Sonoma - Marin Coastal Waters: Levels of radioactivity shall not exceed limits prescribed by provisions of Chapter 5, Title 17, of the California Administrative Code.

2. Lost River: Levels of radioactivity shall not exceed limits prescribed by provisions of Chapter 5, Title 17 of the California Administrative Code; or otherwise shall not:

- (1) exceed 1/30th of the MPC_w values given for continuous occupational exposure in the National Bureau of Standards Handbook No. 69,
- (2) exceed the Public Health Service Drinking Water Standards for waters used for domestic supplies,
- (3) result in accumulations of radioactivity in edible plants and animals that present a hazard to consumers, and
- (4) be harmful to aquatic life.

The North Coastal Regional Water Quality Control Board shall be guided by the following in the establishment and enforcement of waste discharge requirements for the control of pollution from sewage and industrial wastes.

1. There shall be no discharge of industrial wastes to the waters which contain substances or create water quality conditions in conflict with the objectives set forth in this policy.
2. Forest practices, mining operations, road construction, land development, agricultural practices, and other land management practices shall be so designed and managed that erosion of sedimentary or suspended material into the North Coastal waters is minimized.

3. There shall be no direct discharge of domestic sewage effluent to the surface waters of the Smith River~~/~~ and Klamath River in California. --
4. Where sanitary survey information indicates that domestic sewage may indirectly enter the waters of the Smith River and Klamath River or their tributaries, such sewage effluent shall have been so disinfected that, at some point in the treatment process, the median most probable number of coliform organisms of human origin shall not exceed 50 per 100 ml.
5. Any domestic sewage reaching the waters of Humboldt Bay or its tributary streams shall have been so treated that its coliform bacterial content does not exceed a median most probable number of 70 per 100 ml.
6. There shall be no discharge of treated sewage or industrial wastes into Humboldt Bay basin waters, Humboldt - Del Norte Coastal Waters, Mendocino County Coastal Waters, and Sonoma - Marin County Coastal Waters containing substances or creating water quality conditions in conflict with the objectives set forth in this policy.

SAN FRANCISCO
BAY REGION

San Francisco Bay - Region 2

The water quality objectives described herein apply to the Central Coastal waters in California. For purposes of these policies, San Francisco Bay waters include:

1. Coastal waters in California between Pescadero Point in San Mateo County and the westerly half of Tomales Bay in Marin County include waters of the Pacific Ocean three nautical miles offshore from the 100-mile stretch of coastline and the ocean waters within the area three nautical miles offshore from the Farallon Islands between Point Reyes and Montara Point on the mainland. The landward boundary follows the coastline from headland to headland and crosses the Golden Gate between Point Lobos and Point Bonita.
2. Bolinas Lagoon, the westerly half of Tomales Bay, Drakes Estero and Limantour Estero are inland tidal waters considered by this policy, but are not interstate waters within definitions set forth by the California Attorney General. Portions of coastal streams discharging to inland tidal waters and subject to tidal fluctuations are also considered by this policy.
3. The waters considered by this policy are all tidal waters of the Bay System including and contiguous to San Francisco Bay (South Bay¹, Lower Bay², Central Bay³, and North Bay⁴), San Pablo Bay, Suisun Bay and a portion of the western Sacramento-San Joaquin Delta. The westernmost boundary of the area is a line drawn between Point Lobos and Point Bonita at the entrance to the Golden Gate.

¹ South of San Mateo Bridge

² San Mateo Bridge to a line between Hunters Point and Bay Farm Island

³ Lower San Francisco Bay to a line between the Berkeley Pier and Angel Island

⁴ Central San Francisco Bay to a line between Point San Pedro and Point San Pablo

San Francisco Bay Region - 2

A. Organisms of the Coliform Group

1. Pacific Ocean - Pescadero Point to Tomales Bay: Bacteriological Standards set forth in Section 7958, Title 17, Chapter 5, Subchapter 1, Group 10, California Administrative Code:

"Samples of water from each sampling station at a public beach or public water-contact sports area shall have a most probable^e number of coliform organisms less than 1,000 per 100 ml. (10 per ml.); provided that not more than 20 per cent 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 ml. (100 per ml.)

Criteria for "Approved Areas", National Shellfish Sanitation Program, Manual of Operations, Part 1, United State Department of Health, Education and Welfare:

- "a. The area is not so contaminated with fecal material that consumption of the shellfish might be hazardous, and
- b. The area is not so contaminated with radionuclides or industrial wastes that consumption of shellfish might be hazardous, and
- c. The Coliform median MPN of the water does not exceed 70 per 100 ml., and not more than 10 per cent of the samples ordinarily exceed an MPN of 230 per 100 ml. for a 5-tube decimal dilution

test (or 330 per 100 ml., where the 3-tube decimal dilution test is used) in those portions of the area most probably exposed to fecal contamination during the most unfavorable hydrographic and pollution conditions."

"Nearshore waters" are all ocean waters between the shoreline at 2 feet below mean low water and 1,000 feet offshore from that line and may be extended further offshore to areas where whole-body water contact recreational activities occur. "Offshore waters" are all ocean waters located between the nearshore waters and the seaward boundary of the Region.

Criteria for "Approved Areas" National Shellfish Sanitation Program Manual of Operations shall apply to areas as specified in Regional Board's Resolution No. 617 entitled "ADOPTING A LONG-RANGE PLANS AND POLICY WITH RESPECT TO WATER POLLUTION CONTROL WITHIN THE BOLINAS STINSON BEACH AREA, MARIN COUNTY", (Appendix D) and such additional stretches of the ocean shoreline to be designated subsequent to the review of a report from the State Department of Fish and Game indicating areas suited for shellfishing and the present and potential value of the resource by area.

2. Tidal Waters inland from Golden Gate: Sewage-bearing waste discharges shall at no time cause the quality of tidal waters which are determined by this Regional Board to be physically accessible at any time to the public for whole or limited body water-contact recreation uses and that are otherwise suitable for such uses to fail to meet the physical and bacteriological standards as set forth in California Administrative Code, Title 17, Sections 7957 and 7958;

B. Dissolved Oxygen

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters inland from Golden Gate: Minimum of 5 mg/l; when natural factors cause lesser concentrations, then controllable water quality factors shall not cause further reduction in the concentration of dissolved oxygen;

C. Hydrogen Ion Concentrations as pH

1. Pacific Ocean - Pescadero Point to Tomales Bay. See Accompanying table.
2. Tidal waters inland from Golden Gate: The pH shall remain within the limits of 7.0 to 8.5; when natural factors cause the pH to be less than 7.0, then further depression by controllable factors will be determined by the Regional Board on a case-by-case basis.

D. Mineral Content

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters east of the westerly end of Chipps Island:
Following levels in mg/l shall not be exceeded within 2,000 feet of diversions when tidal waters are used for domestic water supplies.

Lead	0.05	Sulfates	250.
Selenium	0.01	Alkyl Benzene Sulfonates	0.5
Arsenic	0.01	Carbon Chloroform Extract	0.2
Chromium, Hexavalent	0.05	Cadmium	0.01
Cyanide	0.01	Barium	0.1
Silver	0.05	Zinc	0.1
Fluoride	0.5	Manganese	0.05
Phenols	0.001	Copper	0.01
		Total Dissolved Solids	500.

Boron shall not exceed 0.5 mg/l within 1,000 feet of diversions when tidal waters are used for agricultural supplies (Note C); and

E. Dissolved Nutrients

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters inland from Golden Gate: Total nitrogen concentration shall not exceed 2.0 mg/l as nitrogen at any point within the Region easterly of Carquinez Strait; in no case shall nutrients be present in concentrations sufficient to cause deleterious or abnormal biotic growths except when factors which are not controllable cause greater concentrations.

F. Toxic or other deleterious substances

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal water inland from Golden Gate: No individual pesticide or combination of pesticides shall reach concentrations found to be deleterious to fish or wildlife at any place. No toxic or other deleterious substances present in concentrations which are deleterious to any of the beneficial water uses to be protected; none at levels which render aquatic life or wildlife unfit for human consumption.

G. Debris and Miscellaneous Floatable or Settleable Materials

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompany table.
2. Tidal water inland from Golden Gate floating materials, petroleum products, bottom deposits -- none other than from natural causes.

H. Turbidity

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters inland from Golden Gate. ^Wno significant variation beyond present natural background levels.

I. Temperature

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters inland from Golden Gate -- no significant variation beyond present background levels.

J. Radioactivity

1. Pacific Ocean - Pescadero Point to Tomales Bay. See accompanying table.
2. Tidal waters inland from Golden Gate in accordance with California Radiation Control Regulations, Subchapter 4, Chapter 5, title 17, California Administrative Code.

CENTRAL COASTAL
REGION

Central Coastal - Region 3

The water quality objectives described herein apply to the Central Coastal waters in California. For purposes of these policies, Central Coastal waters include:

1. Coastal waters from Rincon Point to Point Arguello including Ocean, Tidal waters, harbors, and bays.
2. Coastal waters from Point Arguello to Point Piedras Blancas including ocean, tidal waters, Moss Landing Harbor and the San Lorenzo River Estuary.

Central Coastal Region 3

A. Bacteriological

1. Coastal waters, Rinjon Point to Point Arguello (nearshore waters -- zero to ten fathoms): Coliform Bacteria -- MPN/100 ml.

Water quality shall conform to Bacteriological Standards set forth in Section 7958, California Administrative Code, except that samples during storm periods will not be included. Bacterial concentrations may be affected by causes other than waste discharges. This factor will be taken into consideration when specific cases are reviewed. Water in vicinity of commercial fish unloading and processing stations shall conform to the California State Department of Public Health Standards for the Processing of Whole Fish.

2. Entire Coast - (near shore zone, zero to 18 feet) Point Arguello to Point Predras Blancas; Point Predras Blancas to Pescadero Point ⁽¹⁾; Except shellfishing areas - Coliform Bacteria - MPN/100 ml.

The MPN of coliform organisms shall be less than 1000 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 1000 per 10 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).

Footnote⁽¹⁾: For water in vicinity of public and private piers, which are used for processing of whole or cut fish, the following objectives shall apply:

The MPN of Coliform organisms shall be less than 700 per 100 ml, provided that not more than twenty per cent of the samples may exceed 700 per 100 ml when processing of whole fish is involved, and provided that not more than five per cent of the samples may exceed 700 per 100 ml, when processing of cut fish is involved. Method of analysis to be as set forth above.

3. Shellfishing areas of Point Arguello to Point Predros Blancos to Pescadero Point: Coliform Bacteria - MPN/100 ml.

The coliform median MPN of the water shall not exceed 70 per 100 ml, and not more than 10 percent of the samples ordinarily exceed and MPN of 230 per 100 ml for a 5-tube decimal dilution test (or 330 per 100 ml, where the 3-tube decimal dilution test is used) in those portions of the area most probably exposed to fecal contamination during the most unfavorable hydrographic and pollution conditions.

B. Dissolved Oxygen

1. Rinjon Point to Point Arguello (near shore and offshore) except inner harbor areas, along Santa Barbara Channel:

Dissolved Oxygen	--	Percent saturation
Annual Average	--	Not less than 90%
Single value	--	Not less than 60%

2. Inner harbor areas along the Santa Barbara Channel

Dissolved Oxygen -- Percent Saturation:

Annual Average	--	Not less than 80%
Single Value	--	Not less than 50%

@ 20°C 100 percent saturation

3. Coastal Waters, Point Arguello to Point Predros Blancos (near shore and offshore); coastal waters, Point Piedras Blancas to Pescadero Point (near shore and offshore): The dissolved oxygen concentration shall be greater than 5 mg/l.

C. Hydrogen Ion Concentration as pH

1. Coastal waters - Rinion Point to Point Arguello to Point Predros Blancos to Pescadero Point (near shore and offshore):
pH range 7.0 - 8.5

D. Physical Standards; Turbidity; Suspended Material; Oil; Bottom Deposits; total toxic materials, including heavy metals; Radionuclides; temperature:

1. Coastal waters - Rinion Point to Point Arguello to Point Predros Blancas to Pescadero Point (nearshore and offshore).

a. Physical Standard: No sewage, sludge, grease, or other physical evidence of sewage or industrial wastes shall be visible at any time in the water or on the shore.

b. Turbidity: No turbidity of other than natural origin that will cause substantial visible contrast with the natural appearance of the water (Rin⁶ion Point to Point Arguello).

No turbidity of other than natural origin that will interfere with marine life, including fish, plant and bird life and the organisms upon which they depend, or will cause substantial visual contrast with natural appearance of the water.

(Point Arguello to Point Predros Blancos to Pescadero Point)

c. Suspended material: No suspended material of other than natural origin that will interfere with marine life, including fish, plant and bird life and the organisms upon which they depend, or will cause substantial contrast with natural appearance of the water.

d. Oil: No visible floating oil and grease of waste or petroleum product origin.

e. Bottom deposits: Shall be free of materials that will: (1) adversely alter the composition of the bottom fauna; (2) interfere with the spawning of fish or deleteriously affect their habitat; and (3) adversely change the physical or chemical nature of the bottom.

f. Total toxic materials, including heavy metals: Total toxic materials, including heavy metals shall not be present in concentrations that will be deleterious to aquatic life indigenous to the area.

g. Radionuclides: Shall not be present in concentrations that will exceed the maximum permissible concentrations for radionuclides in water as set forth in Section 30269 of the California Administrative Code.

h. Temperature: Changes by other than natural causes shall not cause undesirable ecological changes nor have deleterious effect upon aquatic plant and animal life.

LOS ANGELES
REGION

Los Angeles - Region 4

The water quality objectives described herein apply to the Los Angeles Region Pacific Ocean Coastal Waters (Rincon Point to San Gabriel River) and Harbors, Marinas and Tidal Prisms in Los Angeles and Ventura Counties. For purposes of these policies, Los Angeles Regional Waters include:

1. Pacific Ocean Coastal waters lie between the mean high tideline and three nautical miles offshore of the outermost channel islands.
2. Those waters of the "outer harbor" of Los Angeles - Long Beach Harbors lying between the outermost points of man-made piers, wharfs, and moles and the breakwater are considered herein as part of the coastal waters.
3. Harbors, marinas, and tidal prisms of Los Angeles and Ventura Counties including:
 - a. Alamitos Bay Area, including the Los Cerritos Channel tidal prism.
 - b. Los Angeles River tidal prism.
 - c. Los Angeles-Long Beach Inner Harbor and Dominguez Channel.
 - d. Ballona Creek tidal prism.
 - e. Marina del Rey and the Venice Canals.
 - f. Mugu Lagoon and the Calleguas Creek tidal prism.
 - g. Hueneme Harbor.
 - h. Channel Islands Harbor and the Edison Canal.
 - i. Ventura Marina and Ventura Keys.

Los Angeles Region 4

A. Bacteriological

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River:

In those reaches of inshore coastal waters where shellfish harvesting is a beneficial use to be protected, the coliform median MPN of the water shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed an MPN of 230 per 100 ml for 5-tube decimal dilution test (or 330 per 100 ml, where the 3-tube decimal dilution test is used) in those portions of the area most probably exposed to fecal contamination during the most unfavorable hydrographic and pollution conditions. Sources of coliform organisms not specifically related to discharges of sewage will be considered when evaluating the actual coliform levels for compliance with this objective.

2. In all other reaches of the nearshore zone of above 1; specific portions of the estuarine waters where ocean water-contact sports are to be protected; in the portion of the tidal prism of the San Gabriel River between Marina Drive and the mouth of the river: The MPN of coliform organisms shall be less than 1000 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 1000 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).

3. Where whole fish handling is enunciated as a beneficial use to be protected (Los Angeles-Long Beach Inner Harbor) the maximum number

of E. coli organisms shall be less than 7 per cc. Not more than 5 percent of the samples shall exceed 7 E. Coli per cc.

B. Dissolved Oxygen

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel:

The mean annual dissolved oxygen concentrations shall be greater than 7 parts ppm (outer harbor area of Los Angeles - Long Beach harbors 6.0 ppm) provided that no single determination shall be less than 5.0 ppm, except when natural conditions cause lesser concentrations.

2. Harbors, marinas and tidal prisms in Los Angeles and Ventura Counties:

a. Where fishing and/or the propagation and sustenance of marine life are to be protected, dissolved oxygen shall be present in concentrations of at least 5.0 milligrams per liter (mg/l), except when natural conditions cause lesser concentrations, at which time these concentrations shall not fall below prevailing background levels.

b. Where fishing and/or propagation and sustenance of marine life are not enunciated as beneficial uses to be protected, dissolved oxygen shall be maintained at or above minimum levels as follows:

1) For Los Ceritos Channel Tidal Prism the minimum level shall be 3.0 mg/l.

2) For the tidal prism of the Los Angeles River, the dissolved oxygen concentration shall be at least 1.0 ppm above Ocean Boulevard; and at least 4.0 ppm, as determined by the average over a complete tidal cycle, below Ocean Boulevard.

3) For the Los Angeles - Long Beach Inner Harbor the minimum limits shall be as follows:

North of the Vincent Thomas Bridge in Los Angeles and the Pontoon Bridge (to be replaced by the Gerald Desmond Bridge) in Long Beach, except within dead end slips and channels, the dissolved oxygen, as determined by the average value of samples taken at the surface and at 20 feet, shall be at least 1 mg/l, and no single sample shall have a dissolved oxygen concentration less than 0.5 mg/l.

In the Inner Harbor area south of these bridges, except in dead end slips and channels, the dissolved oxygen, as determined by the average concentration at the surface and at a depth of 20 feet, shall be 3 mg/l, provided that no single concentration shall be less than 2 mg/l.

In dead end slips and channels within the Inner Harbor, the dissolved oxygen shall at all times be at least 0.5 mg/l.

4) For Dominguez Channel Tidal Prism the minimum level of dissolved oxygen shall be 0.5 mg/l.

C. Hydrogen Ion Concentration as pH

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River (nearshore and offshore): The pH shall range between 7.0 and 8.5

2. Harbors, marinas and tidal prisms and Los Angeles and Ventura Counties: The pH of these waters shall not be below 7.0 nor above

8.5. (Except that the pH range for Dominguez Channel shall be as

noted under Part B.) The pH of the waters in the tidal prism of Dominguez Channel shall not be below 7.0 nor above 9.5

D. Floatable and Settleable Solids, Oil and Grease

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River; Harbors, marinas and tidal prisms in Los Angeles and Ventura Counties:

- a. No waste matter of sanitary or industrial origin shall be visible at any time at or near the surface of the water or on the shore, rocks, channel banks, or harbor and flood control structures.
- b. There shall be no settleable material, other than of natural origin, that would adversely alter the composition of the bottom fauna and flora, interfere with the propagation of fish or deleteriously affect their habitat, adversely change the physical or chemical nature of the bottom, or cause objectionable conditions at the water surface.
- c. No oil or grease of sanitary or industrial origin shall be visible on or in the water or on the bottom, the shore, rocks, channel banks, on structures.

E. Suspended Solids; Transparency and Turbidity; Color:

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River; harbors, marinas and tidal prisms in Los Angeles and Ventura Counties:

- a. There shall be no suspended material of other than natural origin, that would interfere with recreational, industrial, or other beneficial uses, or that would unreasonably affect fish, plant, or bird life and the organisms essential thereto.
- b. Light penetration shall not be significantly impaired by suspended or floating matter of other than natural origin.

There shall be no turbidity, other than of natural origin, that will cause substantial visible contrast with the natural appearance of the water.

c. The color of the water shall not be altered by materials of waste origin and shall be aesthetically pleasing except as it may be affected by natural conditions.

F. Other Materials

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River (nearshore and offshore): Other materials shall not be present in concentrations that would be deleterious to fish, plant or aquatic wildlife.

2. Harbors, Marinas and tidal prisms in Los Angeles and Ventura Counties: There shall be no substances present, other than of natural origin, in concentrations sufficient to deteriorate flood control or marina structures. No substances shall be present in concentrations that would adversely affect marine life or waterfowl or which would cause them to become undesirable or unacceptable for human consumption.

G. Solid Wastes, odor, foamants, nutrients

1. Harbors, marinas and tidal prisms in Los Angeles and Ventura Counties:
Solid Wastes - These waters shall be free of garbage and trash, and the dumping or deposition of these materials into the water shall not be permitted.

Odor - No objectionable odors, other than of natural origin, shall emanate from the waters.

Foamants - The water shall not contain surfactants in quantities that give rise to foam in the course of the normal flow or use of the water.

Nutrients - Nutrients of other than natural origin shall not be present in concentrations capable of causing proliferation of plankton or other undesirable biotic growths.

H. Salinity

1. Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River; harbors, marinas and tidal prisms in Los Angeles and Ventura Counties: The deviation from natural background levels in any area shall not be such as to be harmful to desirable biota.

I. Radioactivity

1. Pacific Ocean Coastal waters, Rincon Point to San Gabriel River (nearshore and offshore): The radioactivity shall be at a level such that it will not be harmful to persons engaging in water contact sports and will not result in unsafe levels in edible marine life and shall not be of such level as to adversely affect marine life itself. Waste discharges into these waters will be controlled pursuant to the requirements of Section 30269 of the California Administrative Code.

2. Harbors, Marinas and tidal prisms in Los Angeles and Ventura Counties: Shall not be present in concentrations that will exceed the maximum permissible concentrations for radionuclides in water as set forth in Section 30269 of the California Administrative Code.

J. Temperature

Pacific Ocean Coastal Waters, Rincon Point to San Gabriel River (near-shore and offshore); harbors, marinas and tidal prisms in Los Angeles and Ventura² Counties: The water temperature shall not exceed the level where it will cause an adverse ecological effect.

CENTRAL VALLEY
REGION

Central Valley - Region 5

The water quality objectives described herein apply to the Central Valley Regional Waters. For purposes of these policies, Central Valley Regional waters include:

1. Sacramento - San Joaquin Delta: Geographically, the Delta is located at the confluence of the Sacramento and San Joaquin Rivers where they empty into the eastern part of San Francisco Bay. The Delta itself is a criss-crossing pattern of rivers, sloughs, interconnecting channels and drains, which form more than 50 islands ranging in size from a few to several thousand acres. The legal Delta as defined by Section 12220 of the State Water Code, is almost wholly within the Central Valley Region and is bounded by the cities of Antioch, Tracy, Stockton, Lodi, Sacramento and Rio Vista and encompasses about 738,000 acres with 700 miles of channels and waterways.
2. Goose Lake: Goose Lake lies astride the Oregon-California Line. Normally about two-thirds of Goose Lake is in the northeastern part of Modoc County, California, with the remaining portion in the south-central portion of Lake County, Oregon. At its overflow elevation of 4,716 feet above mean sea level, surface area of the lake is 194 square miles and the lake is 29 miles long in a north-south direction, with a maximum width of 10 miles. The lake is shallow with gradually sloping shorelines and it has a maximum depth of approximately 24 feet and a capacity of over 2,250,000 acre-feet at the overflow elevation. The lake occupies the southerly end of a semi-enclosed basin which is almost 1,100 square miles

in size, with about two-thirds of the area in Oregon. Occasional overflow from Goose Lake is discharged from the southern end of the basin into the North Fork of the Pit River by way of Russell Slough. Almost one-third (97 square miles) of the California portion of Goose Lake Basin is mountainous, another one-third (120 square miles) is covered by water when the lake is at its highest elevation, while the final one-third (98 square miles) is composed of valley and mesa lands.

Central Valley Region 5

A. Bacteriological

1. Sacramento - San Joaquin Delta: Bacteriological quality of Delta waters shall not exceed a median of 200 fecal coliform per 100 ml.
2. Goose Lake: "The bacteriological quality of the lake shall not exceed a median of 1,000 coliform per 100 ml when associated with sewage wastes as determined by the most probable number technique."

This objective provides for the health and safety of the public who may come into contact with Goose Lake waters. Since coliform are contributed by the great numbers of wildfowl abounding on the lake at times, it is necessary to specify that the count be associated with sewage wastes.

B. Dissolved oxygen

1. Sacramento - San Joaquin Delta: Dissolved oxygen shall not fall below 5.0 mg/l with the following exceptions - 1) In the water bodies where the reduction occurs as a result of natural causes. 2) In certain bodies of water which are constructed for special purposes and from which fish have been excluded or the fishery is not important as a beneficial use.
2. Goose Lake: The dissolved oxygen content shall be above 7.0 mg/l at all times.

C. Hydrogen Ion Concentration as pH

1. Sacramento - San Joaquin Delta: 6.5 - 8.5
2. Goose Lake: 7.5 - 9.5

D. Total Dissolved Solids

1. Sacramento - San Joaquin Delta: Total dissolved solids (TDS) concentration of Delta waters shall be maintained below these limits:

a. Old River at Clifton Court Ferry;

Calendar year, annual average 450 mg/l

Calendar month, average 600 mg/l

Daily, average 800 mg/l

5-year average 400 mg/l

b. Cache Slough at City of Vallejo intake: 250 mg/l

c. Rock Slough at Contra Costa Canal intake;

750 mg/l, mean tidal cycle value, and

380 mg/l, mean tidal cycle value, for at least 65% of any year.

d. San Joaquin River near Vernalis; 500 mg/l mean average concentration over any consecutive 30-day period.

e. Eastern Delta Channels; 700 mg/l mean monthly concentration.

2. Goose Lake: The quantity of total dissolved solids in the lake shall not exceed 1,300,000 tons.

The total dissolved solids concentration in Goose Lake is inversely proportional to the volume of water in the lake so the quantity of salts in the water has remained practically constant at about 1 million tons during the period 1953 to 1966. The lake volume during this same period, fluctuated from 15 to 48 per cent of total capacity. For this reason the quantity of total dissolved solids is the best criterion for limiting the salts in the lake.

Salt concentrations are currently limiting as regards agricultural and fisheries use. Further, Goose Lake appears to contribute underground

flow to the Pit River Basin, and may, under ultimate basin development, contribute recharge waters to adjacent ground waters. This objective seeks to prevent further build-up of salts in Goose Lake, such that fisheries, recreational, and agricultural uses can be optimized within the limits of salts that are naturally present.

E. Nutrients - Plankton growth - total nitrogen

1. Sacramento - San Joaquin Delta: Materials stimulating algal growth shall not be present in concentrations sufficient to cause objectionable algal densities. Total nitrogen content of Delta waters shall not exceed:

- a. 1.0 mg/l in the Central Delta
- b. 2.0 mg/l in the Western Delta.
- c. 3.0 mg/l in the Eastern Delta.

2. Goose Lake: The total plankton population shall be maintained below bloom level. This objective is designed to protect fishlife and recreational use of the lake by limiting the concentration of plankton below the bloom level which is defined as that plankton concentration which causes significant nuisance conditions, or significantly affects desirable fish populations.

F. Biocides - toxic materials

1. Sacramento - San Joaquin Delta: Biocide content of Delta waters shall not exceed 0.6 ug/l as determined by the summation of individual concentrations; nor shall concentrations of individual or combinations of biocide reach that level found to be detrimental to fish and wildlife. Toxic materials shall not be present in quantities sufficient to be harmful to human, plant, animal or aquatic life.

2. Goose Lake: The total chlorinated hydrocarbon pesticide content shall not exceed 0.10 micrograms per liter as determined by the summation of the individual concentrations, and the individual pesticide content shall not reach those levels found to be detrimental to aquatic life and wildlife.

Due to pesticide concentration through the food chain, the present concentration of pesticides in rainbow trout is estimated to be 3.0 mg/l. The maximum allowable concentration of pesticides in commercially sold fish is 7.0 mg/l, therefore any increase in the concentration of pesticides in Goose Lake may render the fisheries resource of the lake unusable. In addition, small amounts of pesticides impair propagation of aquatic life. Concentrations of 3 ppm of pesticides in roe are reported to cause non-hatchability.

Toxic materials shall not be present in quantities sufficient to be harmful to human, plant, animal or aquatic life.

G. Floating solids, foam and debris; oil and grease; bottom deposits; turbidity

1. Sacramento - San Joaquin Delta; Goose Lake:

a. Floating solids, foam and debris, in objectionable quantities from other than natural causes, shall be absent from Delta waters. Goose Lake shall be free of foam, floating solids and debris from other than natural sources.

b. Floating or emulsified grease and oil shall not be present in Delta waters in objectionable quantities.

Goose Lake shall be free from visible floating grease and oil

c. Bottom deposits, of other than natural causes shall be absent from Delta waters.

Goose Lake shall be free from bottom deposits of other than natural origin.

d. Apparent color of Delta waters shall not be visibly altered from its natural appearance. Turbidity, except for periods of storm run-off, shall not exceed:

50 JTU in the waters of the Central Delta

150 JTU in other Delta waters.

No turbidity or color of other than natural origin that will cause visible contrast with the natural appearance of the water will be allowed. (Goose Lake)

H. Tastes and Odors

1. Sacramento - San Joaquin Delta: Taste and odor producing substances shall not be present in concentrations that will impair public water supplies, or in such concentrations as to cause tainting of the flesh of fish or wildfowl. Odors, other than of natural causes, shall be absent from Delta waters.

2. Goose Lake: The lake shall not contain substances of such nature or in such concentrations as to produce tastes or odors in fish, wildlife, or agricultural stock. There shall be no obnoxious odor of other than natural origin.

I. Chloride Concentrations

1. Sacramento - San Joaquin Delta: Chloride concentration shall be maintained below these limits:

Rock Slough at Contra Costa Canal intake

a. 250 mg/l, mean tidal cycle value, and

b. 100 mg/l, mean tidal cycle value, for at least 65% of any year.

Cache Slough at City of Vallejo intake; 100 mg/l

J. Heavy and Trace Metals

1. Sacramento - San Joaquin Delta: Trace Constituents in Delta waters shall be maintained below the following levels, in mg/l:

Arsenic	0.01	Fluoride	0.5
Barium	0.1	Iron	0.3
Boron	0.5	Lead	0.05
Cadmium	0.01	Manganese	0.05
Chromium, Hexavalent	0.05	Selenium	0.01
Copper	0.01	Silver	0.01
Cyanide	0.01	Zinc	0.1

2. Goose Lake: The heavy metals concentration shall be at levels less than those shown, in mg/l:

Arsenic	0.05
Barium	0.50
Cadmium	0.01
Chromium	0.05
Copper	0.10
Iron	1.20
Lead	0.05
Manganese	0.10
Selenium	0.10
Silver	0.02
Zinc	0.04

These values are currently met in the lake, and are generally considered suitable for the maintenance of fish and aquatic life.

K. Boron

1. Goose Lake: The quantity of boron in the lake shall not exceed 4,000 tons. The concentration of boron in Goose Lake varies inversely with the water surface elevation of the lake and has ranged from 2.1 to 4.8 mg/l depending on the volume of water in the lake. The maximum total quantity of boron has been calculated to be almost 4.00 tons and is estimated to remain fairly constant below this level. The purpose of this requirement, requested by the Department of Water Resources, is to limit the amount of boron in the lake, within existing levels, in order to provide all possible protection for agricultural uses of waters affected by surface or sub-surface outflows from the lake.

L. Fluoride

1. Goose Lake: The fluoride content of the lake shall not exceed 1,000 tons. The purpose of this objective, requested by the Department of Water Resources, is to limit the amount of fluoride in the lake within existing levels in order to provide all possible protection for domestic uses of waters affected by surface or sub-surface outflow from the lake. A maximum fluoride quantity of 1,000 tons will limit fluoride concentrations in the lake to existing levels.

M. Radioactive Materials

1. Sacramento - San Joaquin Delta: Levels of radioactivity in water shall be in accordance with the provisions of Chapter 5, Title 17, of the California Administrative Code or such modifications as may be made from time to time.

2. Goose Lake: The quantity of radioactive contaminants shall not exceed a gross beta activity level of 1,000 picocuries per liter, an alpha emitter level of 3 picocuries per liter and a Strontium-90 activity level of 10 picocuries per liter.

N. Temperature

1. Sacramento - San Joaquin Delta - Temperature of Delta water shall not be altered to a degree that adversely affects water uses.

2. Goose Lake: The mean daily temperature shall not exceed 70°F, or the mean daily ambient air temperature, whichever is greater.

Trout, present in the lake in limited numbers, are adversely affected by elevated lake temperatures. Daily average temperature for the main body of the lake water appear to range from 39 to 67°F. The Department of Fish and Game has recommended that 70°F, which appears to be reasonably attainable under natural circumstances, is the maximum that can be tolerated by the existing trout fishery. Unusually warm weather may create exceptions to this limit, and thus such possibility is recognized by permitting higher temperatures when caused by ambient air temperature.

LAHONTAN
REGION

Lahonton - Region 6

The water quality objectives described herein apply to the Lahonton Regional waters. For purposes of these policies, Lahonton Regional waters include:

1. Truckee River: The Truckee River is an interstate mountain stream which flows from Lake Tahoe at a point in California for a distance of approximately 36 miles prior to entering the State of Nevada. Lake Tahoe is the principal source of water for the Truckee River. Principal tributaries, excluding Lake Tahoe, are Donner Creek, Prosser Creek, and Little Truckee River.

2. Lake Tahoe: The Tahoe Basin has an area of approximately 506 square miles of which 314 are land and 192 represent the water surface of Lake Tahoe. Over 60 tributary streams carry water in Lake Tahoe. The largest of these is the Upper Truckee River. Approximately 70 percent of the ^{Lake} Lake is located in California and 30 percent in Nevada.

3. West Fork Carson River: The West Fork of the Carson River is an interstate mountain stream which flows through Alpine County in California for a distance of approximately 20 miles prior to entering the State of Nevada. The California portion of the river drains an area of approximately 100 square miles on the east slopes of the Sierra-Nevada Mountain Range.

4. East Fork Carson River: The East Fork of the Carson River is an interstate mountain stream which flows through Alpine County in

California for a distance of approximately 40 miles prior to entering the State of Nevada. The river drains an area of approximately 300 square miles on the east slopes of the Sierra Nevada Mountain Range.

5. West Walker River and Lake Topaz: The West Walker River is an interstate mountain stream which flows through Mono County in California for a distance of approximately 35 miles prior to entering the State of Nevada. Lake Topaz, a man-made reservoir lying directly on the California-Nevada state line, is a storage and regulating reservoir for the West Walker River with a capacity of 59,440 acre feet.

6. East Walker River: The East Walker River is an interstate mountain stream which flows through Mono County in California for a distance of approximately 20 miles prior to entering the State of Nevada. The river has its headwaters high on the eastern slopes of the Sierra Nevada Mountains and flows in a northeasterly direction across Mono County to California's eastern boundary, then into Nevada.

Lahonton Region - 6

A. Organisms of the Coliform Group

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz and East Walker River: None attributable to human wastes.
2. Lake Tahoe: A density not greater than the values shown in the following table:

<u>Lake Area</u>	<u>Coliform Densities</u> (MPN/100 ml)	
	<u>Median</u>	<u>Maximum</u>
Undeveloped Lakefront Areas		
10 yds. offshore	5	32
100 yds. offshore	3	15
Developed Lakefront Areas		
10 yds. offshore	240	700
100 yds. offshore	15	64
Directly Influenced by Stream		
10 yds offshore	240	700
100 yds. offshore	32	240

B. Dissolved Oxygen

1. Truckee River: A concentration greater than 85% of saturation, and greater than 7.0 mg/l at all times.
2. West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz and East Walker River: A concentration greater than 80% of saturation, and greater than 7.0 mg/l at all times.

3. Lake Tahoe: A concentration greater than 90% of saturation at any point in the lake.

C. Hydrogen Ion concentration as pH

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz, and East Walker River: A pH within the range of 6.5 to 8.5 at all times, but normally within the range of 7.0 to 8.0.

2. Lake Tahoe: A pH within the range of 7.0 to 8.4 at any point in the lake.

D. Mineral Content

1. Truckee River: TDS $\bar{X} \leq 80$ mg/l; max ≤ 100 mg/l

Boron ≤ 0.3 mg/l

Sodium < 40 percent

Chlorides $\bar{X} < 4$ mg/l; max ≤ 8 mg/l

2. Lake Tahoe: Specific Electrical Conductance -- A mean annual conductance not greater than 95 micromhos per centimeter at 25°C., and a maximum conductance not greater than 105 micromhos per centimeter at 25°C. at any point in the lake.

Chloride Ions - A mean annual concentration not greater than 3 milligrams per liter, and a maximum concentration not greater than 5 milligrams per liter at any point in the lake.

3. West Fork Carson River: TDS $\bar{X} < 75$ mg/l; max ≤ 100 mg/l

Boron ≤ 0.5 mg/l

Sodium < 40 percent

Chlorides $\bar{X} < 3$ mg/l; max. ≤ 6 mg/l

4. East Fork Carson River: TDS $\bar{X} < 110$ mg/l; max. ≤ 175 mg/l
 Boron ≤ 0.5 mg/l
 Sodium < 45 percent
 Chloride $\bar{X} < 5$ mg/l; max ≤ 10 mg/l
5. West Walker River: TDS $\bar{X} < 100$ mg/l; max ≤ 170 mg/l
 and Lake Topaz
 Boron ≤ 0.5 mg/l
 Sodium < 60 percent
 Chlorides $\bar{X} < 5$ mg/l; max ≤ 10 mg/l
6. East Walker River: TDS $\bar{X} < 175$ mg/l; max ≤ 300 mg/l
 Boron ≤ 0.5 mg/l
 Sodium < 50 percent
 Chlorides $\bar{X} < 10$ mg/l; max ≤ 20 mg/l

E. Dissolved Nutrients

1. Truckee River: Nitrates $\bar{X} \leq 1.0$ mg/l; max ≤ 2.5 mg/l
 Phosphates $\bar{X} \leq 0.1$ mg/l; max ≤ 0.3 mg/l

2. Lake Tahoe: Plankton Growth Potential - A mean annual growth potential at any point in the lake not greater than twice the mean annual growth potential at the limnetic reference station.

Soluble Phosphorus - A mean annual concentration not greater than 7 micrograms per liter at any point in the lake.

Total Soluble Nitrogen - A mean annual concentration of the sum of soluble nitrate -N, nitrite-N, and ammonia-N not greater than 25 micrograms N per liter at any point in the lake.

Plankton Count/- A mean seasonal concentration not greater than 100 per milliliter and a maximum concentration not greater than 500 per milliliter at any point in the lake.

3. West Fork Carson River: Nitrates $\bar{X} < 2.0$ mg/l; max ≤ 3.0 mg/l
Phosphates $\bar{X} < 0.05$ mg/l; max ≤ 0.1 mg/l
4. East Fork Carson River: Nitrates $\bar{X} < 1.5$ mg/l; max ≤ 2.0 mg/l
Phosphates $\bar{X} < 0.1$ mg/l; max ≤ 0.2 mg/l
5. West Walker River: Nitrates $\bar{X} < 1.5$ mg/l; max ≤ 2.0 mg/l
and Lake Topaz
Phosphates $\bar{X} < 0.2$ mg/l; max ≤ 0.3 mg/l
6. East Walker River: Nitrates $\bar{X} < 3.0$ mg/l; max ≤ 4.5 mg/l
Phosphates $\bar{X} < 0.5$ mg/l; max ≤ 1.0 mg/l

F. Toxic or Other Deleterious Substances

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz, and East Walker River: At all times less than the concentrations toxic or harmful to aquatic life, wild or domestic animals, and humans including but not limited to those substances specified in the United States Public Health Service Drinking Water Standards.

2. Lake Tahoe: There shall be no disposal of treated or untreated domestic sewage, industrial waste, garbage or other solid wastes, or any other deleterious materials, solid, liquid, or gaseous, to the surface waters of the Lake Tahoe Basin.

G. Debris and Miscellaneous Floatable or Settleable Materials

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz³, and East Walker River: Settleable solids shall be less than the concentration that would change the physical nature of the stream bottom or adversely affect the aquatic environment. There shall be no taste and odor causing substances

which imparts a foreign taste or odor. Foreign materials - none other than natural origin which impairs the natural beauty.

2. Lake Tahoe: Foreign materials, taste and odor causing substances - none which impairs the natural beauty, clarity, or purity of the lake or which imparts foreign taste or odor to the lake waters.

H. Turbidity

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River and Lake Topaz: A median annual turbidity less than 10 turbidity units, and no turbidity other than that of natural origin.

2. Lake Tahoe: A vertical extinction coefficient less than 0.08 per meter when measured at any depth below the first meter, and a turbidity less than 3 turbidity units at any point in the lake too shallow to determine a reliable extinction coefficient.

3. East Walker River: A median annual turbidity less than 20 turbidity units and no turbidity other than that of natural origin.

I. Temperature

1. Truckee River, West Fork Carson River, East Fork Carson River, West Walker River, Lake Topaz, and East Walker River: Not to exceed 22°C. at any time.

COLORADO RIVER
BASIN REGION

Colorado River Basin (California) - Region 7

The water quality objectives described herein apply to the Colorado River Basin waters in California. For purposes of these policies, Colorado River Basin waters (California) include:

1. The main stem of the Colorado River in California, in the reach commencing at the southerly limit of the Nevada-California Boundary, and terminating in the Northerly International Boundary with the Republic of Mexico.
2. Alamo River in California originates by drawing a small area in Mexico. From the International Boundary the river flows northward, and within a sixty-mile reach, it drains a substantial portion of Imperial Valley in California before discharging into Salton Sea.
3. New River originates in Mexico, crosses the International Boundary at Calexico, flows northward through Imperial Valley for a distance of sixty miles before discharging into Salton Sea.

Colorado River Basin (California) - 7

General Water Quality Objectives:

Waste discharges into Colorado River water shall not endanger the public health.

Waste discharges shall not adversely affect the esthetic condition of waters, including their clarity and freedom from unsightliness, odors, and adverse taste.

Wastes discharged from municipal, industrial, and other controllable sources which are reasonably amenable to treatment shall be controlled with the objective of not increasing the mineralization or adversely affecting the existing chemical, physical, and biological characteristics of the waters for agricultural, raw domestic, recreational, and industrial purposes, and its suitability as a habitat for aquatic plant and animal life (including waterfowl).

Specific Water Quality Objectives

A. Bacteriological

1. Colorado River waters: waters shall remain free of organisms pathogenic to human beings.

B. Dissolved Oxygen

1. The dissolved oxygen concentrations in Colorado River, Alamo River, and New River, shall at all times be maintained above 6 mg/l.

C. Hydrogen Ion Concentration as pH

1. Colorado River Waters (California): 6.5 - 8.6
2. Alamo River & New River: 7.0 - 8.0

D. Mineral Content

1. Colorado River water: Wastes, from municipal, industrial, or other controllable sources, containing heavy metals or associated chemicals shall not be discharged into the Colorado River in amounts such that their cumulative effects may interfere with any beneficial use. In no event shall wastes be discharged into the River in quantities that will, at any time, cause the concentrations of these constituents to exceed the following limits at Imperial Dam.

<u>Constituent</u>	<u>Limiting Concentration (mg/l)</u>
Arsenic (As)	0.05
Barium (Ba)	0.5
Cadmium (Cd)	0.01
Chromium (Hexavalent) (Cr^{+6})	0.05
Copper (Cu)	0.05
Cyanide (CN)	0.10
Lead (Pb)	0.05
Selenium (Se)	0.01
Silver (Ag)	0.05
Zinc (Zn)	0.5
Methylene Blue anionic surfactant (MBAS)	0.01
Boron (at Imperial Dam)	0.4
Nitrate	5
Iron	0.2
Manganese	0.05
Ammonia (NH_3)	1
pH	8.0

2. Alamo River and New River: Community wastes, other industrial wastes, and wastes from other controllable sources discharged toward Alamo River and New River shall not contain a total dissolved ^{total} oxygen content in excess of 4000 mg/l, as an average; or in excess of 4500 mg/l at anytime. Also all controllable sources discharged toward Alamo River and New River shall not cause presence of heavy metals or associated chemicals, or biocides, in concentrations which might threaten or adversely affect aquatic or wildlife resources in Alamo River and New River or threaten cumulative effects upon such life in

Salton Sea, or which might pose a threat to recreationists engaged in water-contact activities in Salton Sea.

E. Dissolved Nutrients

Criteria not established for Colorado River Basin.

F. Toxic or other deleterious substances

1. Colorado River water shall be free from biocides, corrosive substances, and other substances which may be considered toxic or deleterious to humans, stock animals, or to aquatic or wildlife resources.

2. Alamo River and New River waters; controllable sources discharged towards these waters shall not cause presence of heavy metals or associated chemicals, or biocides, in concentrations which might threaten or adversely affect aquatic or wildlife resources in the Alamo and New River, or threaten cumulative effects upon such life in Salton Sea, or which might pose a threat to recreationists engaged in water-contact activities in Salton Sea.

Notwithstanding, industrial wastes from manufacturing, processing, or tank-cleaning operations which may reasonably be expected to contain biocides shall not be discharged towards.

G. Debris and Miscellaneous Floatable or Settleable Materials

1. Colorado River Waters:

a. The waters shall be free from substances attributable to domestic or industrial waste or other controllable sources, that will settle to form sludge or bottom deposits, or that may cause putrescence or odors, or that may otherwise interfere with any beneficial use of water.

b. The waters shall be free from floating debris, oil, grease, scum, or other carried or floating materials.

c. The waters shall be free from materials attributable to domestic or industrial waste or other controllable sources, which may produce taste or odor in the water or detectable off-flavor in the flesh of fish, that may alter the water's existing color or turbidity, or that may adversely affect other conditions in the river.

2. Alamo River and New River: Shall not cause foam in the course of normal flow or use of the water. Shall not cause the presence of oil, grease, scum, sludge, or solids of sewage origin in the river water. Shall not cause odors or other nuisance conditions to Imperial Valley Communities.

Notwithstanding above, sewage disposals towards Alamo and New Rivers shall be preceded by treatment at least sufficient to result in essentially complete removal of settleable and floatable material.

H. Turbidity

1. Stated for the Colorado River under General Water Quality objectives.
2. Alamo and New Rivers -- Criteria not established.

I. Temperature

1. Waste discharges shall not cause such change in the temperature of the Colorado River water as may affect any beneficial use.
2. Controllable waste sources discharged towards Alamo River and New River shall not cause more than 2°F rise in temperature of the river water downstream of the discharge.

SANTA ANA
REGION

j. Radioactivity

1. Concentrations of radioactive substances in Colorado River water shall not exceed the following limits:

Radium -- 226	1 uuc/liter
Strontium - 90	2 uuc/liter
Alpha emitters	8 uuc/liter
Gross Beta	50 uuc/liter

Santa Ana - Region 8

The water quality objectives described herein apply to the Santa Ana Regional waters. For purposes of these policies, Santa Ana Regional waters include:

1. Pacific Ocean Coastal waters between San Gabriel River and the Drainage Divide between Muddy Canyon and Moro Canyon, Orange County excluding Bays, Sloughs, Estuaries and Tidal Prism of the San Gabriel River.
2. Coastal Bays, Marinas and Sloughs. The bays, marinas, and sloughs considered in this policy are Anaheim Bay, Sunset Bay, Bolsa Bay, Newport Bay, Upper Newport Bay, and the tidal prisms and adjacent sloughs of the Santa Ana River.

Santa Ana Region 8

A. Bacteriological

1. Pacific Ocean (near shore waters): In the reach from the San Gabriel River to the Newport Harbor West Jetty.
2. Tidal Prism of the Santa Ana River downstream from Pacific Coast Highway only and Newport Shores Marina south of Highland Street only.

The coliform median MPN of the water shall not exceed 70 per 100 ml, and not more than 10 percent of the samples exceed an MPN of 230 per 100 ml for a 5-tube decimal dilution test (or 330 per 100 ml, where the 3-tube decimal dilution test is used) in those portions of the area most probably exposed to fecal contamination during the most unfavorable hydrographic and contamination conditions. Sources of coliform organisms not specifically related to discharges of sewage will be considered when evaluating the actual coliform levels for compliance with this objective.

3. In all other reaches of the near-shore zone (Pacific Ocean): The MPN of coliform organisms shall be less than 1000 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 1000 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).

4. All Bay waters (Coastal Bays, Marinas & Sloughs)

- a. Water Contact sports areas only - The most probable number of coliform organisms shall be less than 1000 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 1000 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/ml)

- b. Fish Canning use only - At the point of withdrawal of water for fish canning during canning season only the maximum number of E. coli organisms shall be less than 7 per cc. Not more than 5 percent of the samples shall exceed 7 E. coli per cc.
- c. Shellfish Harvesting Areas - The coliform median MPN of the water shall not exceed 70 per 100 ml, and not more than 10 percent of the samples exceed an MPN of 230 per 100 ml for a 5-tube decimal dilution test (or 330 per 100 ml, where the 3-tube decimal dilution test is used) in those portions of the area most probably exposed to fecal contamination during the most unfavorable hydrographic and contamination conditions. Sources of coliform organisms not specifically related to discharges of sewage will be considered when evaluating the actual coliform levels for compliance with the objective.

5. San Gabriel River Tidal Prism: In the portion of the tidal prism of the San Gabriel River between Marina Drive and the mouth of the river, the MPN of coliform organisms shall be less than 1000 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 1000 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).

B. Dissolved Oxygen

1. Pacific Ocean (nearshore and offshore): The mean annual dissolved oxygen concentrations shall be greater than 7 parts per million (ppm), provided that no single determination shall be less than 4.5 ppm, except when natural conditions cause lesser concentrations.

2. Santa Ana River and Newport Shores Marina: The D. O. concentration shall be greater than 4 mg/l provided that no more than 20 percent of the samples collected at any station during any quarter shall be less than 4 mg/l and provided further that no single sample shall be less than 3 mg/l.

3. Coastal Bays, Marinas & Sloughs

a. Bay waters in General - The D.O. concentration shall be greater than 5 mg/l, provided that no more than 20 percent of the samples collected at any station during any quarter shall be less than 5 mg/l and provided further that no single sample shall be less than 4.5 mg/l.

b. Dead End Channels in Newport Bay - The D.O. concentration shall be greater than 4 mg/l, provided that not more than 20 percent of the samples collected at any station during any quarter shall be less than 4 mg/l and provided further that no single sample shall be less than 3 mg/l.

4. San Gabriel River tidal prism: The Dissolved Oxygen concentration shall be greater than 5 mg/l and shall not be reduced below 5 mg/l by any water quality factor of other than natural origin.

C. Hydrogen Ion Concentration as pH

1. Pacific Ocean (nearshore and offshore): 7.0 - 8.6

2. Coastal Bays, marinas and sloughs: 7.0 - 8.5

3. San Gabriel River tidal prism: 7.0 - 8.5

The pH of the waters shall lie between 7.0 and 8.5 unless affected by a water quality factor of natural origin

D. Salinity

1. Pacific Ocean (nearshore and offshore); Coastal bays, marinas, and sloughs; San Gabriel River tidal Prism: The deviation from natural background levels in any area shall not be such so as to be harmful to desirable biota.

E. Nutrients

1. All Bay Waters (Coastal Bays, marinas & sloughs); tidal prism of the Santa Ana River and Newport Shores marina: Nutrients (nitrogen, silicate, and phosphate) shall not be present, except from natural conditions, in amounts that will cause deleterious or abnormal growths to occur on the substrate or to foster biotic growths that are harmful to beneficial uses.
2. San Gabriel River tidal prism: Nutrients, of other than natural origin, shall not be present in concentrations capable of causing proliferation of undesirable biotic growths.

F. Toxic and other deleterious substances

1. Pacific Ocean (nearshore & Offshore): There shall be no toxic materials present in amounts deleterious to fish, plant or aquatic wildlife.
2. Coastal Bays, marinas and sloughs: Toxic materials shall not be present in amounts deleterious to fish, plants, or other aquatic wildlife. Other materials shall not be present in concentrations that render aquatic life or wildlife undesirable for human consumption.
3. San Gabriel River tidal prism: Materials shall not be present in concentrations that would be deleterious to fish, plant or aquatic wildlife or render the taste of the flesh of such animals unpalatable for human consumption.

G. Floatable and Settleable Solids, Oil and Grease

1. Pacific Ocean (nearshore); coastal bays, marinas and sloughs; tidal prism of the Santa Ana River and Newport Shores Marina:

- a. No sewage solids or physical evidence of waste discharge shall be visible at any time on the water nor on any of the beaches, rocks, or beach and structures.
- b. There shall be no settleable solids, other than natural materials, that would adversely alter the composition of the bottom fauna and flora, interfere with fish propagation or deleteriously affect their habitat, or adversely change the physical or chemical nature of the bottom or cause objectionable conditions on the water surface.
- c. Oil and grease shall not be visible, in objectionable amounts, at the water surface, suspended in water, or deposited on the substrate, beaches, or rocks and jetties.

2. Pacific Ocean (offshore):

- a. (see G.1.a.)
- b. Oil and grease shall not be visible, in objectionable amounts, at the water surface, suspended in water, or deposited on the substrate.
- c. There shall be no floatable material, other than of natural origin, that constitutes a hazard to boating or navigation.

3. San Gabriel River tidal prism:

- a. There shall be no visible floatable or suspended solids of waste origin in the water or deposited on the banks of the river at any time.

b. There shall be no settleable or suspended solids of waste origin that would adversely affect the composition of the bottom fauna and flora, interfere with fish propagation, or deleteriously affect their habitat, or adversely change the physical or chemical nature of the bottom.

c. Oil and grease shall not be visible in the water or deposited on the channel surfaces or structures.

H. Suspended Solids

1. Pacific Ocean (nearshore and offshore); coastal bays, marinas and sloughs: There shall be no suspended solids, of other than natural origin, that interfere with marine life including fish, plants, and bird life and the organisms that they depend on.

I. Transparency and Turbidity

1. Pacific Ocean (nearshore); coastal bays, marinas and sloughs:

a. Light penetration shall not be impaired by suspended or floating matter, other than of natural origin.

b. There shall be no turbidity, other than of natural origin, that will cause substantial visible contrast with the natural appearance of the water.

2. Pacific Ocean (offshore):

a. Light penetration shall not generally be impaired by floating or suspended matter, other than of natural origin, in the offshore waters southeast of Corona del Mar.

b. (See I.1.b.)

3. San Gabriel River tidal prism:

a. Light penetration shall not be impaired by materials of waste origin.

b. There shall be no turbidity, other than of natural origin, that will cause substantial visible contrast with the natural appearance of the water.

J. Odors

1. Pacific Ocean (nearshore and offshore); Santa Ana River and Newport Shores Marina; Coastal Bay, marinas and sloughs; San Gabriel River tidal prism: No objectionable odors, other than those of natural origin, shall emanate from the waters.

K. Color

1. Pacific Ocean (nearshore and offshore); Santa Ana River and Newport Shores Marina; Coastal Bay, marinas and sloughs: The color of the water shall be aesthetically pleasing except as it may be affected by natural conditions.

2. San Gabriel River tidal prism: The color of the water shall not be altered by materials of waste origin.

L. Radioactivity

1. Pacific Ocean (nearshore and offshore): The radioactivity, as it is affected by controllable factors, will not be harmful to persons engaging in water contact sports and will not result in unsafe levels in edible aquatic life and shall not be of such level as to adversely affect aquatic life itself. Waste discharges into these waters will

be controlled pursuant to the requirements of Section 30269 of the California Administrative Code.

2. Santa Ana River and Newport Shores Marina; coastal bays, marinas and sloughs: The radioactivity, as it is affected by controllable factors, shall be at a level such that it will not be harmful to persons engaging in water contact sports and will not result in unsafe levels in edible aquatic life and shall not be of such level as to adversely affect the aquatic life itself.

3. San Gabriel River tidal prism: The radioactivity of the water of the tidal prism, insofar as it is affected by factors of other than natural origin, shall not exceed the levels prescribed by the California Administrative Code for discharges of waste effluent to uncontrolled areas.

M. Temperature

1. Pacific Ocean (nearshore and offshore); coastal bays, marinas and sloughs; San Gabriel River tidal prism: The water temperature shall not be raised to a level where it will cause an undesired ecological change or have a deleterious effect on aquatic life.

N. Foamants

1. San Gabriel River tidal prism: The water shall not contain surfactants or other materials in quantities that give rise to foam in the course of flow or use of the water.

**SAN DIEGO
REGION**

San Diego - Region 9

The water objectives described herein apply to the San Diego Regional waters. For purposes of these policies, San Diego Regional waters include:

1. Pacific Ocean within the San Diego Water Quality Control Region applies to the waters of the Pacific Ocean along the California coastline, between the United States -- Mexico boundary on the south and the divide between Muddy and Moro Canyons on the north.

Distance from shore of the seaward limit of the area varies from three nautical miles at the International boundary to a maximum of approximately 53 nautical miles west of the City of San Diego.

2. Tijuana River Basin in California. The Tijuana River is an ephemeral of United States and Mexico and emptying into the Pacific Ocean approximately one and one-half miles North of the United States-Mexico boundary. For the purposes of applying water quality objectives to the Tijuana River Basin in California, hydrologic subareas are grouped into three drainages: (a) Camps Creek, (b) Cottonwood and Tecata Creeks, and (c) the Tijuana River.

3. San Diego Bay. For ease of reference, the bay has been divided into three sections -- South Bay, Central Bay and North Bay. South Bay consists of the area of the bay south of the reserve fleet; Central Bay contains that portion from South Bay to the ferry crossing; North Bay includes the remainder of the bay from the ferry crossing to the channel entrance.

4. Coastal Lagoons in San Diego and Southeast Orange Counties.

In San Diego and Southern Orange County there are twelve stream mouth and marsh areas of varying size which are usually separated from the open ocean by sand bars. Local custom has designated the larger areas as lagoons, and this terminology is used interchangeably with marsh, slough and wetlands.

- a. Sorrento Lagoon is the marshland mouth of the Los Penasquitos
- b. San Dieguito River Slough near the northerly limit of the City of Del Mar.
- c. San Elijo Lagoon is the slough area of Escondido Creek, located between the communities of Solana Beach and Cardiff-by-the-Sea.
- d. Batiquitos Lagoon lies between the unincorporated community of Leucodia and the City of Carlsbad.
- e. Buena Vista Lagoon lies between the cities of Carlsbad and Oceanside, being partially within each city.
- f. Loma Alta Slough is entirely within the City of Oceanside and is approximately one mile north of Buena Viata Lagoon.
- g. The slough area of the San Luis Rey River extends about one-half mile inland from the ocean, to the vicinity of the Interstate Highway 5 bridge.
- h. Santa Margarita Lagoon is within the Camp Pendleton Naval Reservation of the United States Marine Corps. It is the slough area of the Santa Margarita River and extends one mile inland from the ocean.

i. The slough areas of San Onofre and San Mateo Creeks are small areas within the Camp Pendleton Naval Reservation of the United States Marine Corps, just southeast of San Mateo Point.

j. The Juan Creek in southern Orange County divides the unincorporated communities of Dana Point and Capistrano Beach.

k. The slough area of Aliso Creek in southern Orange County reaches the coastal area in the university incorporated community of South Laguna.

5. Mission Bay and tidal prism of the San Diego River are entirely within the City of San Diego. They are situated in an area which is rectangular in shape, with each side approximately two and three-quarter miles in length.

6. Agua Hedrona Lagoon, the tidal prism of Agua Hedrona Creek, fronts on the Pacific Ocean approximately 42 miles north of the United States - Mexico boundary and is entirely within the limits of the City of Carlsbad.

San Diego Region 9

A. Bacteriological

1. Pacific Ocean (near shore zone) Tijuana River including tidal prism, San Diego Coastal Lagoons, Mission Bay and Tidal Prism of San Diego River, Aqua Hedionda Lagoon: The most probable number of coliform organisms shall be less than 1000 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 1000 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 (10 per ml).

In the application of this water quality objective, the Regional Board will take into account the effect of runoff from the land during and immediately following periods of precipitation.

2. San Diego Bay: The coliform density throughout San Diego Bay shall not exceed 10 per milliliter in more than 20 percent of any 20 consecutive samples of bay water at each designated sampling station. In addition, where bay waters are used for whole fish handling, the density of E. Coli shall not exceed 7 per milliliter in more than 20 percent of any 20 consecutive samples of bay water.

B. Dissolved Oxygen

1. Pacific Ocean (near shore and offshore): Annual mean dissolved oxygen concentration shall not be less than 7.0 milligrams per liter and the concentration shall at all places be greater than 5.0 milligrams per liter, except when natural conditions cause lesser concentrations, at which time the dissolved oxygen levels shall not be reduced below prevailing background levels.

2. Tijuana River Basin, Coastal Lagoons of San Diego and Southwestern Orange Counties, Mission Bay and Tidal Prism of San Diego River, Aqua Hedionda Lagoon: The concentration shall at all places be greater than 5.0 milligrams per liter, except when natural conditions cause lesser concentrations, at which time the dissolved oxygen levels shall not be reduced below prevailing background levels.

3. San Diego Bay : The dissolved oxygen concentration in bay water shall not fall below the levels stated below. Recognition shall be given to the modifying effect of such natural factors as seasonal temperature changes, upwelling and climatic conditions.

Zone 1: Not less than 7.0 mg/l

Zones 2, 3, 4, 5, 7,
8, 9, 10, 11: Not less than 6.0 mg/l

Zone 6: Not less than 4.5 mg/l

C. Hydrogen Ion Concentration as pH

1. Pacific Ocean: 7 - 8.6
(near shore and offshore)

2. Tijuana River: 7.0 - 8.6

3. San Diego Bay: 7.5 - 8.5

4. San Diego Coastal Lagoons:

5. Mission Bay and Tidal
prism of San Diego River: 7.0 - 8.6 except when natural conditions
cause greater or lesser values.

6. Aqua Hedionde Lagoon:

D. Mineral Content

1. Pacific Ocean (near shore & offshore): Salinity - the deviation from natural background levels in any area shall not be great enough to be harmful to desirable biota.
2. Tijuana River Basin (Camps, Cottonwood and Tecate Creeks) total dissolved solids median concentration ≤ 500 mg/l.
3. Tijuana River Tidal Prism: Total dissolved solids median concentration ≤ 2100 mg/l.

E. Nutrients

1. San Diego Bay: Nutrient levels shall be limited to those levels necessary to minimize phytoplankton blooms, thus preventing unsightliness, turbidity, color, and oxygen depression.
2. Tijuana River Basin, Coastal Lagoons of San Diego and Southeast Orange Counties, Mission Bay and Tidal Prism of San Diego River, and Agua Hedionda Lagoon: Concentrations of nitrates and phosphates of waste origin, by themselves or in combination with naturally occurring nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth.

F. Toxic and Other Deleterious Substances

1. Pacific Ocean (near shore and offshore):
2. Tijuana River Basin
3. Coastal Lagoons of San Diego and Southeast Orange Counties
4. Mission Bay & Tidal Prism of San Diego River
5. Agua Hedionda Lagoon

There shall be no toxic materials present in amounts deleterious to fish, plant or aquatic wildlife, or which would render aquatic life or wildlife undesirable for human consumption.

6. San Diego Bay: The bay waters shall be free of toxic substances, suspended solids, odor or color in quantities which would make the waters unsuitable for the beneficial uses enunciated for protection.

G. Debris and Miscellaneous Floatable or Settleable Materials

1. Pacific Ocean (near shore zone), coastal lagoons in San Diego County & Southeast Orange County, Mission Bay including Tidal Prism of San Diego, Aqua Hedionda Lagoon.

a. No sewage solids or other visible evidence of waste discharge shall be visible at any time on the water or on any of the beaches, rocks, jetties or beach structures.

b. There shall be no settleable solids, other than of natural origin, that would adversely alter the composition of the bottom fauna and flora; interfere with fish propagation or deleteriously affect their habitat; adversely change the physical or chemical nature of the bottom; or cause objectionable conditions on the water surface.

c. Oil and grease shall not be present in noticeable amounts at the water surface; suspended in the water; or deposited on the substrate, beaches, rocks or jetties.

2. Pacific Ocean (offshore zone)

a. There shall be no floatable material, other than of natural origin, in amounts which would create esthetically objectionable conditions, or that would constitute a hazard to boating or navigation.

b. There shall be no settleable solids, other than of natural origin, that would adversely alter the composition of the bottom fauna and flora; interfere with fish propagation or deleteriously affect their habitat; adversely change the physical or chemical nature of the bottom; or cause objectionable conditions on the water surface.

c. Oil and grease shall not be present, in objectionable amounts, at the water surface or suspended in the water.

3. Tijuana River Basin:

a. No sewage solids or other visible evidence of waste discharge shall be visible at any time on the water, on the shore, or on shore structures.

b. There shall be no settleable solids, other than of natural origin, that would adversely alter the composition of the bottom fauna and flora; interfere with fish propagation or deleteriously affect their habitat; adversely change the physical or chemical nature of the bottom; or cause objectionable conditions on the water surface.

c. Oil and grease shall not be visible, in noticeable amounts, at the water surface; suspended in the water; or deposited on the substrate or shore.

4. San Diego Bay: In areas of the bay where body contact sports and/or propagation and sustenance of fish and wildlife are the governing beneficial uses:

a. There shall be no sludge deposits;

b. The waters of the bay shall be free of garbage, trash, floating solids, grease and/or petroleum oil slicks, to the extent such material shall not be present in more than two percent of all individual observations.

In areas of the bay where industrial use is the governing beneficial use, the waters of the bay shall contain no garbage or trash and shall be free of sludge deposits, floating solids, grease and/or petroleum oil slicks in quantities which would cause these waters to become unsuitable for the enunciated use.

H. Suspended Solids

1. Pacific Ocean (nearshore): There shall be no suspended solids, of other than natural origin, that would interfere with use of ocean waters for recreational activities and industrial supply; withdrawal and use of waters for onshore scientific purposes; or interfere with marine life, including fish, plant and bird life and the organisms that they depend upon.

2. Pacific Ocean (offshore), Tijuana River Basin, Coastal Lagoons in San Diego and Southeast Orange Counties: There shall be no suspended solids, of other than natural origin, that would interfere with use of lagoon waters or with marine life, including fish, plant and bird life and the organisms that they depend upon.

I. Solid Wastes

1. Tijuana River Basin, San Diego Bay, coastal lagoons of San Diego Bay, Coastal Lagoons of San Diego and Southeast Orange Counties, Mission Bay & tidal prism, Agua Hedionda Lagoon: Garbage, trash, or other solid municipal, industrial or agricultural waste shall not be present as a result of direct discharge into estuarine waters, Mission Bay or the tidal prism of the San Diego River, lagoon waters, or deposition in or along tributary streams in such manner that said wastes would be washed

into the tributary stream flow.

2. No solid waste objectives established for the Pacific Ocean and no solid objectives established for municipal and agricultural wastes.

J. Transparency and Turbidity

1. Pacific Ocean (nearshore), Coastal Lagoons of San Diego and S.E. Orange Counties, Rijuana River Basin, Mission Bay & Tidal Prism, Aqua Hedronda Lagoon:

a. Light penetration shall not be impaired by suspended or floating matter, other than of natural origin.

b. There shall be no turbidity, other than of natural origin, that will cause substantial visible contrast with the natural appearance of the water as observed from shore or boats.

2. Pacific Ocean (offshore):

a. Light penetration shall not generally be impaired by floating or suspended matter, other than of natural origin, to the extent that marine life dependent upon photosynthetic activity is adversely affected.

b. There shall be no turbidity, other than of natural origin, that will cause substantial visible contrast with the natural appearance of the water as observed from shore.

3.. San Diego Bay: The transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced contions, shall not be less than eight feet in more than 20 percent of the readings in any zone, as measured by a standard Secchi disk. Wherever the water is less than ten feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone.

K. Odors

1. Pacific Ocean, Tijuana River Basin, Coastal Lagoons, Mission Bay and tidal prism, Agua Hedrona Lagoon: No objectionable odors, other than those of natural origin, shall emanate from the waters of the tidal prism.
2. San Diego Bay: The bay waters shall be free of toxic substances, suspended solids, odor or color in quantities which would make the waters unsuitable for the beneficial uses enunciated for protection.

L. Color

1. Pacific Ocean, Tijuana River Basin, coastal lagoons, Mission Bay and tidal prism, Agua Hedrona Lagoon: The color of the water shall be esthetically pleasing as viewed from shore, except as it may be affected by natural conditions.
2. San Diego Bay: Mentioned in odor section.

M. Radioactivity

1. Pacific Ocean, Tijuana River Basin, coastal lagoons, Mission Bay and tidal prism, Agua Hedrona Lagoon: The radioactivity of (ocean waters, lagoon waters, other water) Insofar as it may be influenced by controllable factors, shall not exceed the levels prescribed by the California Administrative Code for discharges of waste effluents to uncontrolled areas.
2. San Diego Bay: Levels of radioactivity shall be in accordance with the provisions of Chapter 5, Title 17, of the California Administrative Code.

N. Temperature

1. Pacific Ocean: In areas that support desirable attached plant growth, or in areas that have a capability of supporting such growth, the water temperature shall not be raised to that point where it will cause an undesirable ecological change or have a deleterious effect upon aquatic life.

2. San Diego Bay: Water temperature, insofar as it may be influenced by any controllable factor, shall be maintained at such a level that desirable marine plant or animal life is not adversely affected, nor marine life stimulated so as to produce unsightly or malodorous conditions.

3. Tijuana River Basin, Coastal lagoons, Mission Bay including tidal prism, Agua Hedionda Lagoon: The water temperature shall not be raised to that point where it will cause an undesirable ecological change or have a deleterious effect upon aquatic life.