



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MAY 26 2000

Reply to:
WTR-5

Edward C. Anton, Acting Executive Director
California State Water Resources Control Board
P. O. Box 100
Sacramento, CA 95812-0100

Dear Mr. Anton:

The U. S. Environmental Protection Agency (EPA) has reviewed amendments to the *Water Quality Control Plan, Los Angeles Region* (Basin Plan) for the coastal watersheds of Los Angeles and Ventura County. These amendments were adopted by the Los Angeles Regional Water Quality Control Board (Regional Board) on March 27, 1989, October 22, 1990, June 13, 1994, and January 27, 1997 (Regional Board Resolution Nos. 89-03, 90-11, 94-07, and 97-02, respectively). These amendments have been approved by the State Water Resources Control Board (State Board) and the State Office of Administrative Law (OAL). In accordance with State law, all amendments take effect upon approval by the OAL.

Our action today pertains only to those portions of the 1989, 1990, 1994, and 1997 amendments which are subject to the EPA's water quality standards approval authority under Section 303(c) of the Clean Water Act (CWA), i.e., portions addressing antidegradation, beneficial uses, water quality objectives, and implementation of water quality standards for surface waters. Section 303(c) requires the EPA to approve or disapprove new or revised state-adopted water quality standards. In today's action, the EPA approves the 1989, 1990, 1994, and 1997 amendments to Chapter 2, *Beneficial Uses*; Chapter 3, *Water Quality Objectives*; and *Specific Criteria for Site-specific Determination of Effluent Limits* in Chapter 4, *Strategic Planning and Implementation*, of the Basin Plan.

In addition, the EPA disapproves the implementation policy contained in the 1994 amendment to *Beneficial Uses for Specific Water Bodies* in Chapter 2, *Beneficial Uses*, which improperly suspends the application of new effluent limitations based on water quality objectives for protection of the beneficial use of Municipal and Domestic Supply (MUN) in Waste Discharge Requirements [including National Pollutant Discharge Elimination System (NPDES) permits], for permitted facilities discharging to water bodies indicated by "*" under MUN in Table 2-1 of the Basin Plan. This unique implementation procedure does not protect these water bodies for their beneficial use as required under 40 CFR 131.10(a); 40 CFR 131.11(a); 40 CFR 131.13; and 40 CFR 122.44(d)(1); and results in the failure to maintain and protect an existing beneficial use as required by 40 CFR 131.12(a)(1). These actions are further detailed in the following pages.

We apologize for our delay in taking action on these amendments. Since 1994, our water quality standards efforts have focused on promulgation of the California Toxics Rule (CTR). As you know, we have completed this rulemaking and our water quality standards efforts are shifting to the review and approval/disapproval of new or revised state-adopted water quality standards contained in regional board basin plans. The CTR provides the basis for addressing critical issues related to priority toxic pollutants and facilitates our ability to consult with the U. S. Fish and Wildlife Service and the National Marine Fisheries Service on basin plan amendments, under Section 7 of the Endangered Species Act (ESA).

ESA Consultation with the Services on EPA's Action

Section 7(a)(2) of the Endangered Species Act (ESA) states that each federal agency shall ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any federally listed endangered or threatened species. On March 6, 2000, the EPA initiated consultation with the U. S. Fish and Wildlife Service and the National Marine Fisheries Service (collectively, the Services) on today's action, under Section 7(a)(2) of the ESA. The 1989, 1990, 1994, and 1997 amendments to Chapter 2, *Beneficial Uses*; Chapter 3, *Water Quality Objectives*; and *Specific Criteria for Site-specific Determination of Effluent Limits* in Chapter 4, *Strategic Planning and Implementation*, of the Basin Plan approved today under Section 303(c) of the CWA are subject to the results of consultation with the Services under Section 7(a)(2) of the ESA.

Public Participation

The EPA compliments the State on its efforts to include the public in the development and review of new and revised water quality standards. Such involvement on the part of the public is an integral component of a successful water quality program. The EPA finds that the public participation procedures followed by the State in the development and adoption of Regional Board Resolution Nos. 89-03, 90-11, 94-07, and 97-02 are consistent with the procedural requirements set forth at 40 CFR 131.20(b).

Scope of EPA's Approval

Pursuant to Section 303(c) of the CWA and implementing federal regulations at 40 CFR 131, and subject to certain limitations and understandings as discussed below (see Scope of EPA's Disapproval), the EPA hereby approves the water quality standards contained in the 1989, 1990, 1994, and 1997 amendments to the Basin Plan. The following paragraphs outline the scope of the EPA's approval of each chapter of the Basin Plan, and explain any limitations and understandings upon which our approval is based.

Chapter 1. INTRODUCTION: The 1994 and 1997 amendments to this chapter of the Basin Plan include descriptions of the geography, geology, ecology, and water resources of the Los Angeles Region; a discussion of the Porter-Cologne Water Quality Act and roles of the State Board and Regional Boards; and a description of the function of basin plans and the Continuing Planning Process. Because Chapter 1 does not contain regulatory provisions pertaining to water quality standards, the 1994 and 1997

amendments to this chapter are outside the scope of this action; therefore, the EPA is taking no action on these amendments.

Chapter 2. BENEFICIAL USES: In accordance with the *Sources of Drinking Water* policy adopted by the State Board on May 19, 1988 (State Board Resolution No. 88-63), the 1989 amendment to this chapter of the Basin Plans designates the beneficial use of Municipal and Domestic Supply (MUN) to water bodies lacking this designation. Regional Board Resolution No. 89-03 amends Chapter 2, *Present and Proposed Beneficial Uses*, in *Water Quality Control Plan for the Santa Clara River Basin (4A)* and *Water Quality Control Plan for the Los Angeles River Basin (4B)*, to include the following statement:

Water bodies within the Region that do not have beneficial uses designated for them in Table 4 (in the updated Appendices with the 1978 revisions) [1975 Basin Plans, as amended by the State in 1976 and 1978] are assigned MUN designations in accordance with the provisions of State Water Resources Control Board Resolution No. 88-63 which is, by reference, a part of these Basin Plans. These MUN designations in no way affect the presence or absence of other beneficial use designations in these water bodies.

The 1994 amendment extensively updates this chapter of the Basin Plan. Minor wording changes have been made to most of the standard beneficial use definitions. These definitions were jointly developed by Regional Board and State Board staff to provide both clarity and consistency state-wide. The beneficial use definitions for Commercial and Sport Fishing (COMM) and Preservation of Biological Habitat (BIOL) have been expanded from the previous Basin Plan. COMM – previously limited to commercial and sport fishing in oceans, bays and estuaries – has been expanded to include fishing in freshwaters of the Region. BIOL – previously limited to the preservation of State Board designated Areas of Special Biological Significance – has been expanded to include established refuges, parks, sanctuaries, ecological reserves, and other areas where natural resources require special protection. Three new beneficial uses have been added: Aquaculture (AQUA), Wetland Habitat (WET), and Estuarine Habitat (EST). EST replaces existing beneficial uses of Warm Freshwater Habitat (WARM) and Marine Habitat (MAR) in estuarine areas. These new beneficial uses were developed in order to better describe the beneficial uses of the Region's water bodies.

The 1994 amendment adds several water bodies to the list of Regional surface waters. These water bodies are generally small tributaries and wetlands which were not specifically identified in the previous Basin Plan. They are indicated as "proposed water body" (pr) in the April 28, 1994 draft update for the Basin Plan (see Administrative Record for today's action). For a few water bodies, names have been changed to correct previous errors. These water bodies are indicated as "name change" (nc) in the April 28, 1994 draft update. As required by federal water quality standard regulations, all surface waters must have water quality standards. Consistent with this requirement, all surface waters not specifically listed (generally small tributaries) are designated with the same beneficial uses as the water bodies to which they are tributary (see Basin Plan, p. 2-4 and

Footnote "a" in Tables 2-1, 2-3, and 2-4).

The EPA reviewed the beneficial use designations of Regional water bodies listed in the 1994 Basin Plan (see Tables 2-1, 2-3, and 2-4). Beneficial uses for specific water bodies are designated "existing" (E), "intermittent" (I), or "potential" (P) and are protected as required by Regional water quality objectives contained in Chapter 3, *Water Quality Objectives*. Water bodies designated E, I, and P currently receive an equal level of protection under the Basin Plan. Consistent with the "fishable/swimmable" goal of the CWA, all Regional surface waters are designated E, I, or P for Water Contact Recreation (REC-1) and Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Estuarine Habitat (EST), and/or Marine Habitat (MAR). Many beneficial use designations have been added to Regional surface waters, including Rare, Threatened, or Endangered Species (RARE). For particular beneficial uses, many surface waters previously designated P have been changed to E or I. Several surface waters previously designated I have been changed to E.

Based on our review of beneficial use Tables 2-1, 2-3, and 2-4 in the April 28, 1994 draft update and the June 13, 1994 Change Sheet for the April 28, 1994 draft Basin Plan, no beneficial uses have been deleted; however, the Staff Report for the Basin Plan, draft of April 29, 1994, does discuss the deletion of beneficial uses to correct misapplications in the previous Basin Plan. No applicable water quality objectives have become less stringent as a result of de-designations. Typographical errors in the surface water beneficial use tables should be corrected in the next triennial review (e.g., Bouquet Canyon, Hydrologic Unit No. 403.51).

Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, all inland surface waters in Table 2-1 of the 1994 Basin Plan are designated E, I, or P for Municipal and Domestic Supply (MUN), excluding Colorado Lagoon and Madrona Marsh. In the next triennial review, the rationale for not designating Colorado Lagoon and Madrona Marsh for the beneficial use of MUN should be footnoted in Table 2-1. The EPA understands that at a future date, the Regional Board plans to re-propose for exception to the MUN designation those inland surface waters which are found to meet the exceptions criteria set forth in Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63. During this interim period, the Regional Board has adopted a new implementation policy which exempts Waste Discharge Requirements from including new effluent limitations based on MUN designations resulting from these resolutions for sources of drinking water (see Basin Plan, p. 2-4; these waters are indicated by an "*" under MUN in Table 2-1).

To facilitate implementation of reach-specific water quality objectives for Total Dissolved Solids, Sulfate, Chloride, Boron, Nitrogen, and Sodium Adsorption Ratio, the 1994 amendment refines reach boundaries for water bodies in the Ventura River watershed, Santa Clara River watershed, Calleguas Creek watershed, and the San Gabriel River watershed. To facilitate implementation of the Chloride Policy (Regional Board Resolution No. 97-02), the 1997 amendment refines the reach boundaries for water bodies in the Santa Clara River watershed, the Calleguas-Conejo Creek watershed, the

Los Angeles River watershed, and the San Gabriel River watershed. Consequently, Figures 2-3, 2-4, 2-8, and 2-9 in the 1994 Basin Plan have been revised.

The EPA approves the 1989 amendment to Chapter 2, *Present and Proposed Beneficial Uses*, in *Water Quality Control Plan for the Santa Clara River Basin (4A)* and *Water Quality Control Plan for the Los Angeles River Basin (4B)*. In addition, the EPA approves the 1994 and 1997 amendments to Chapter 2, *Beneficial Uses*, discussed above, but, as discussed further under Scope of EPA's Disapproval, disapproves the implementation policy contained in the 1994 amendment to *Beneficial Uses for Specific Water Bodies* in Chapter 2, *Beneficial Uses*, which improperly suspends the application of new effluent limitations based on water quality objectives protecting the beneficial use of Municipal and Domestic Supply (MUN) in Waste Discharge Requirements (including NPDES permits), for permitted facilities discharging to water bodies indicated by "*" under MUN in Table 2-1 of the Basin Plan.

Chapter 3. WATER QUALITY OBJECTIVES: The 1990 amendment to this chapter is restricted to changes related to water quality objectives for minerals in the Santa Clara River Basin Plan (4A). The 1994 amendment extensively updates Chapter 3 of the Basin Plan. The 1997 amendment is restricted to changes related to chloride levels in surface waters and interim discharge limitations for chloride applicable to Waste Discharge Requirements.

Changes to Narrative Water Quality Objectives

The 1994 amendment adds new narrative water quality objectives for Bioaccumulation, Biochemical Oxygen Demand, Total Residual Chlorine, Exotic Vegetation, Polychlorinated Biphenyls, Wetlands Hydrology, and Wetlands Habitat. Important additions or changes have been made to the narrative objectives for Chemical Constituents; Solid, Suspended, or Settleable Materials; and Toxicity; these additions (in *italics*) and/or changes (in ~~strikeout~~) are described, as follows:

- **Chemical Constituents:** *Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated use.*¹
- The narrative objectives for **Suspended Material, Settleable Material and Sediment** are combined into one narrative objective for **Solid, Suspended, or Settleable Materials:** *Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.*
- **Toxicity:** ~~All waters shall not contain be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this~~

¹ The Basin Plan continues to apply maximum contaminant levels (MCLs) for inorganic chemicals specified in Title 22 of the California Code of Regulations (CCR) to water bodies designated MUN.

objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration (SWRCB and Department of Fish and Game has issued "Guidelines for Performing Static Acute Toxicity Fish Bioassays in Municipal and Industrial Wastewaters - July 1976") or other appropriate methods as specified by the State or Regional Board.

The survival of aquatic life in surface waters, subjected to waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" (dilution water) as described in the guidelines. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

There shall be no acute toxicity in ambient waters, including mixing zones. The acute toxicity objective for discharges [see previous paragraph] dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival when using an established USEPA, State Board, or other protocol authorized by the Regional Board.

There shall be no chronic toxicity in ambient waters outside of mixing zones. To determine compliance with this objective, critical life stage tests for at least three species with approved testing protocols shall be used to screen for the most sensitive species. The test species used for screening shall include a vertebrate, an invertebrate, and an aquatic plant. The most sensitive species shall then be used for routine monitoring. Typical endpoints for chronic toxicity tests include hatchability, gross morphological abnormalities, survival, growth, and reproduction.

~~In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.~~

Effluent limits for specific toxicants can be established by the Regional Board to control toxicity identified under Toxicity Identification Evaluations (TIEs).

To fully implement paragraph two of the narrative toxicity objective, the acute toxicity implementation procedures in paragraph three of the objective should be updated in the next triennial review. As part of this update, the Regional Board should consider adopting detailed implementation procedures for both acute and chronic toxicity consistent with the effective *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Board Resolution Nos. 2000-015 and 2000-030, adopted on March 2, 2000 and April 26, 2000, and approved by

OAL on April 28, 2000, May 18, 2000, and May 22, 2000), in combination with the EPA's *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991) and *Regions 9 and 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs* (Denton and Narvaez, May 31, 1996).

The 1994 amendment includes minor wording changes to the narrative objectives for Coliform Bacteria, Biostimulatory Substances, Floating Material, Dissolved Oxygen, Oil and Grease, Pesticides, pH, Taste and Odor, Temperature, and Turbidity. We note that the second paragraph under Pesticides should be italicized to indicate that it is part of the water quality objective; this correction should be made in the next triennial review.

New narrative water quality objectives for Bioaccumulation, Biochemical Oxygen Demand, Total Residual Chlorine, Exotic Vegetation, Polychlorinated Biphenyls, Wetlands Hydrology, and Wetlands Habitat expand the Regional Board's ability to protect beneficial uses. Additions or changes to narrative objectives for Chemical Constituents; Solid, Suspended, or Settleable Materials; and Toxicity clarify existing objectives, resulting in improved protection of beneficial uses. Minor wording changes made to narrative objectives for Coliform Bacteria, Biostimulatory Substances, Floating Material, Dissolved Oxygen, Oil and Grease, Pesticides, pH, Taste and Odor, Temperature, and Turbidity do not affect the protection of beneficial uses.

Changes to Numeric Water Quality Objectives

The 1990 amendment revises reach-specific numeric water quality objectives for Chloride (i.e., reach bounded by Camino Cielo and Casitas Vistas Road) in the Ventura River; Sodium Adsorption Ratio (i.e., reach bounded by W. Pier Highway 99 and L. A./Ventura County Line) and Sulfate (i.e., reach bounded by L. A./Ventura Co. Line and A Street, Fillmore) in the Santa Clara River; Sulfate and Chloride in Santa Paula Creek; Sulfate in Sespe Creek; and Total Dissolved Solids, Sulfate, Chloride, and Boron in Piru Creek. Changes to numeric objectives for these constituents result in more stringent objectives and are consistent with water quality standards regulations set forth at 40 CFR 131.

The 1994 amendment adds new numeric water quality objectives for Nitrogen (Nitrate and Nitrite), Polychlorinated Biphenyls, and Ammonia (freshwater). In conjunction, the Regional Board has adopted an eight year compliance schedule for ammonia which will "sunset" on June 12, 2002. During this interim period, discharges must either make the necessary adjustments/improvements to meet the ammonia objective, or conduct studies leading to an approved site-specific objective for ammonia. Also, important additions have been made to the numeric objectives for Dissolved Oxygen and Temperature for waters designated WARM; these additions (in *italics*) are described, as follows:

- **Dissolved Oxygen:** *At a minimum (see specifics below) [for surface waters designated WARM, COLD, or COLD/SPWN], the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.*

- **Temperature:** For waters designated WARM, water temperature shall not be altered by more than 5 °F above the natural temperature. *At no time shall these WARM-designated waters be raised above 80 °F as a result of waste discharges.*

The four numeric objectives for Nitrogen (Nitrate and Nitrite) are based on the California Department of Health Services primary maximum contaminant levels (MCLs) for total nitrate and nitrite (as N), nitrate (as NO₃), and nitrite (as N). These objectives are equivalent to the EPA MCLs for total nitrate and nitrite (as N), nitrate (as N), and nitrite (as N), respectively, and are protective of the beneficial use of MUN.

The acute (24-hour average) numeric objectives for Polychlorinated Biphenyls (PCBs) protecting freshwater and saltwater aquatic life are based on *Ambient Water Quality Criteria for Polychlorinated Biphenyls - 1980* (EPA/440/5-80-068, 1980). Consistent with this criteria guidance, these objectives apply to the sum of Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016 and use a 24-hour averaging period. In addition, the Basin Plan includes a 30-day average numeric objective for the protection of human health which is applied to the sum of Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016. Subsequently, the EPA promulgated the California Toxics Rule (CTR) which contains chronic aquatic life (4-day average) and human health (30-day average) water quality criteria for PCBs applicable to inland surface waters, enclosed bays, and estuaries in the Los Angeles Region (see 65 FR 31681, May 18, 2000). Chronic criteria apply to the sum of Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016; however, human health criteria have been recalculated and apply to total PCBs (e.g., the sum of all congener, or isomer, or homolog, or aroclor analyses). Because the Basin Plan and the CTR regulate PCBs differently, both for the protection of aquatic life and human health, the more stringent of these requirements will apply (see Basin Plan, p. 5-1).

The acute numeric objective for Ammonia is based on *Ambient Water Quality Criteria for Ammonia - 1984* (EPA 440/5-85-001, January 1985). The chronic numeric objective for Ammonia reflects minor revisions to the 1984 chronic criterion summarized in *Memorandum: Revised Tables for Determining Average Freshwater Ammonia Concentrations* (EPA, Office of Water, July 20, 1992). Subsequently, the EPA has updated the acute and chronic ambient water quality criteria for ammonia (see *1999 Update of Ambient Water Quality Criteria for Ammonia*, EPA-822-R-99-014, December 1999). As a result of this update, the acute criterion for ammonia is dependent on pH and fish species, while the chronic criterion is dependent on pH and temperature. At lower temperatures, the chronic criterion is also dependent on the presence or absence of early life stages of fish. This temperature dependency results in a gradual increase in the chronic criterion as temperature decreases, and, when early life stages of fish are expected to be present, a chronic criterion that is more stringent at temperatures below 15 °C. Accordingly, at most temperatures, the numeric objectives adopted by the Regional Board are as protective as the EPA's current recommendations. In those instances where the numeric objective for Ammonia is less stringent than the EPA's updated water quality criteria, we believe that the narrative objective for toxicity and NPDES permitting regulations at 40 CFR 122.44(d)(1) provide the legal basis for applying 304(a) criteria in the development of protective water quality based effluent limitations for ammonia. In

the next triennial review, the Regional Board should update the numeric objectives for ammonia based on a consideration of the EPA's 1999 update.

The 1994 amendment updates numeric objectives based on maximum contaminant levels (MCLs) for inorganic and organic chemicals and radioactivity, and the limiting and optimum concentrations for fluoride. Both sets of these numeric objectives protect the beneficial use of MUN. These updates are consistent with the requirements of Title 22 of the California Code of Regulations (CCR). In addition, Title 22 requirements are incorporated by reference which is prospective including future changes to Title 22, as such changes take effect.

The 1994 amendment applies existing reach-specific numeric objectives for Total Dissolved Solids, Sulfate, Chloride, Boron, Nitrogen, and Sodium Adsorption Ratio to all designated beneficial uses for selected inland surface waters, rather than limiting their application to those designated MUN and/or AGR (see Table 3-8). Changes to numeric objectives for these six constituents have been made where previous objectives did not accurately represent background, or where water quality has improved, and are summarized in Table 3-8 of the April 28, 1994 draft update for the Basin Plan (see Administrative Record for today's action). Changes to numeric objectives for these constituents result in more stringent objectives and are consistent with water quality standards regulations set forth at 40 CFR 131. We note that the 1994 printing of the Basin Plan does not correctly reflect the 1990 amendment for two reach-specific numeric objectives²; these typographical errors should be corrected in the next triennial review.

Consistent with 40 CFR 131, the 1997 amendment permanently changes the numeric objectives for chloride in three stream reaches of the Los Angeles River watershed (i.e., Reach 1, 3, and 6) and one stream reach of the San Gabriel River watershed (i.e., Reach 2). In this same action, the Regional Board adopted a three year variance from chloride objectives for three stream reaches of the Santa Clara River watershed (i.e., Reach 4, 5, and 6) and three stream reaches of the Calleguas Creek watershed (i.e., Reach 2, 3, and 4). This variance provision will "sunset" on January 8, 2001. In conjunction, numeric interim discharge limits for chloride and a three year schedule for conducting chlorine loading analyses in these two watersheds were incorporated into the Basin Plan. Although these actions relax chloride requirements in these watersheds, information submitted by the Regional Board in support of this change demonstrates that the new objectives and interim limits continue to fully protect WARM/COLD and MUN beneficial uses (see *Ambient Water Quality Criteria for Chloride - 1988*, EPA 440/5-88-001, February 1988 and national primary and secondary drinking water regulations set forth at 40 CFR 141, respectively).

² Chloride in reach bounded by Camino Cielo and Casitas Vistas Road in the Ventura River and Sodium Adsorption Ratio in reach bounded by W. Pier Highway 99 and L. A./Ventura County Line in the Santa Clara River.

New Discharge Limitations

The 1994 amendment adds the following technology based discharge limitation for Total Residual Chlorine to the Basin Plan: *Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L* It is based primarily on a consideration of equipment reliability and monitoring limitations at sewage treatment plants. This discharge limitation is not sufficiently stringent to ensure the protection of aquatic life beneficial uses in Regional surface waters because it is not water quality based. To ensure that inland surface waters, enclosed bays, and estuaries are free from toxic concentrations of chlorine, in the next triennial review, the Regional Board should expand the existing narrative objective for total residual chlorine to include numeric objectives for the protection of aquatic life. These objectives should be based on a consideration of the EPA's national recommended water quality criteria for chlorine (see *Ambient Water Quality Criteria for Chlorine - 1984*, EPA 440/5-84-030, January 1985). In the interim, we believe that the narrative objective for total residual chlorine and NPDES permitting regulations at 40 CFR 122.44(d)(1) provide the legal basis for applying 304(a) criteria in the development of protective water quality based effluent limitations for chlorine (expressed as total residual chlorine).

The EPA approves the 1990, 1994, and 1997 amendments to Chapter 3, *Water Quality Objectives*, of the Basin Plan discussed above, with the following understandings:

- It is the intent of the Regional Board, that, consistent with 40 CFR 122.44(d)(1)(vi), where a specific chemical pollutant is discharged at concentrations which cause, have the reasonable potential to cause, or contribute to an excursion above the basic narrative water quality objective for Toxicity in the Basin Plan (see paragraph one under Toxicity), water quality based effluent limitations must be established using calculated numeric water quality criteria for the pollutant that will attain and maintain the basic narrative toxicity objective and fully protect the beneficial use.
- It is the intent of the Regional Board that, consistent with the previous Basin Plan, compliance with paragraph two of the narrative objective for Toxicity shall be evaluated, at minimum, using a 96-hour acute toxicity test and the numeric objective for acute toxicity in paragraph three of the Toxicity objective.
- In the narrative objectives for Dissolved Oxygen and pH, the new phrase "*as a result of waste discharges*" means as a result of point sources and non-point sources discharging wastes into Regional surface waters.

Chapter 4. STRATEGIC PLANNING AND IMPLEMENTATION, Specific Criteria for Site-specific Determination of Effluent Limits: This subsection was introduced in 1994 and includes a provision which establishes basic criteria for limiting the size of mixing zones in rivers and streams, and lakes and reservoirs and authorizes the Regional Board to allow a mixing zone for compliance with water quality objectives on a case-by-case basis. The criteria for sizing mixing zones are:

In rivers and streams an approved mixing zone can not extend more than 250 feet from the point of discharge or be located less than 500 feet from an adjacent mixing zone.

In lakes or reservoirs, it [the mixing zone] may not extend [more than] 25 feet in any direction from the discharge point, and the sum of mixing zones may not be more than 5% of the volume of the water body.

The EPA approves this amendment, but strongly recommends that the Regional Board develop additional mixing zone criteria and implementation procedures consistent with the effective *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, in combination with the EPA's *Technical Support Document for Water Quality-based Toxics Control*.

The remaining 1994 amendments to Chapter 4 include descriptive information regarding various programs and strategies to control pollutants from point and nonpoint sources and for the remediation of pollution. Because these remaining amendments do not contain regulatory provisions pertaining to water quality standards, they are outside the scope of this action; therefore, the EPA is taking no action on these amendments.

Chapter 5. PLANS AND POLICIES: This chapter summarizes State plans and policies most important to the Regional Board's implementation of the Basin Plan. In conjunction, this chapter contains the following clarifying provision adopted by the Regional Board in the 1976 amendments to the Basin Plans: *In the event that inconsistencies exist among various plans and policies, the more stringent provisions apply* (see p. 5-1). The remaining regulatory provisions of this chapter have been either effectively superseded or incorporated into Chapters 2, 3, and/or 4 of the Basin Plan (in accordance with the 1989, 1990, 1994, and 1997 amendments), or do not pertain to water quality standards and are outside the scope of this action; therefore, the EPA is taking no further action on the plan and policy summaries described in Chapter 5. Current EPA-approved regulatory provisions in Chapter 5 which pertain to water quality standards are referenced under **EPA-Approved Water Quality Standards for the Los Angeles Region.**

Chapter 6. MONITORING AND ASSESSMENT: The 1994 amendment to this chapter describes significant State Board and Regional Board monitoring and assessment programs. Because this amendment does not contain regulatory provisions pertaining to water quality standards, it is outside the scope of this action; therefore, the EPA is taking no action on this amendment.

Scope of EPA's Disapproval

The EPA disapproves the 1994 amendment to *Beneficial Uses for Specific Water Bodies* in Chapter 2, *Beneficial Uses*, which establishes a new implementation policy affecting the implementation of water quality objectives protecting the beneficial use of Municipal and Domestic Supply (MUN). This new implementation policy improperly suspends the application

of new effluent limitations based on water quality objectives for protection of the beneficial use of MUN in Waste Discharge Requirements (including NPDES permits), for permitted facilities discharging to water bodies indicated by "*" under MUN in Table 2-1 of the Basin Plan. This unique implementation procedure does not protect these water bodies for their beneficial use as required under 40 CFR 131.10(a); 40 CFR 131.11(a); 40 CFR 131.13; and 40 CFR 122.44(d)(1); and results in the failure to maintain and protect an existing beneficial use as required by 40 CFR 131.12(a)(1).

To rectify this situation, the Regional Board must adopt an amendment to the Basin Plan which deletes the following Basin Plan provision (see Basin Plan, p. 2-4): *In the interim, no new effluent limitations will be placed in Waste Discharge Requirements as a result of these designations until the Regional Board adopts this amendment.* Proper criteria for excepting water bodies from the beneficial use of MUN are found in Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63. In addition, changes to this beneficial use designation must comply with applicable water quality standards regulations set forth at 40 CFR 131.

EPA-Approved Water Quality Standards for the Los Angeles Region

1. California Regional Water Quality Control Board, Los Angeles Region, 1997 (January). *Amendment to the Water Quality Control Plan to Incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters.* Regional Board Resolution No. 97-02. California Regional Water Quality Control Board, Los Angeles, CA.
2. California Regional Water Quality Control Board, Los Angeles Region, 1994. *Water Quality Control Plan, Los Angeles Region.* Chapter 2, *Beneficial Uses*; Chapter 3, *Water Quality Objectives*; *Specific Criteria for Site-specific Determination of Effluent Limits* in Chapter 4, *Strategic Planning and Implementation*; and Chapter 5, *Plans and Policies.* California Regional Water Quality Control Board, Los Angeles, CA.
3. California Water Resources Control Board, 1997. *California Ocean Plan, Water Quality Control Plan, Ocean Waters of California.* California Water Resources Control Board, Sacramento, CA.
4. California Water Resources Control Board, 1988. *Sources of Drinking Water.* State Board Resolution No. 88-63. California Water Resources Control Board, Sacramento, CA.
5. California Water Resources Control Board, 1987. *Federal Antidegradation Policy.* California Water Resources Control Board Memorandum, October 7, 1987.
6. California Water Resources Control Board, 1986. *In the matter of the petition of Rimmon C. Fay to review Order No. 85-56 of the California Regional Water Quality Control Board, Los Angeles Region, NPDES Permit No. CA0054097. Our File No. A-411.* State Board Order No. WQ 86-17. California Water Resources Control Board, Sacramento, CA.

7. California Water Resources Control Board, 1975. *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries in California*. State Board Resolution No. 75-89. California Water Resources Control Board, Sacramento, CA.
8. California Water Resources Control Board, 1974. *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. State Board Resolution No. 74-43. California Water Resources Control Board, Sacramento, CA.
9. California Water Resources Control Board, 1968. *Statement of Policy with Respect to Maintaining High Quality Water in California*. State Board Resolution No. 68-16. California Water Resources Control Board, Sacramento, CA.
10. United States, Office of the Federal Register, National Archives and Records Administration, 2000. Federal Register, Volume 65, Number 97, May 18, 2000, Page 31681 - 31719, *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule*. Washington, D. C. (Referred to as the "California Toxics Rule".)
11. United States, Office of the Federal Register, National Archives and Records Administration, 1999. Code of Federal Regulations, Protection of Environment, Title 40, Part 131, Subpart D – *Federally Promulgated Water Quality Standards*, Section 36 – *Toxics criteria for those states not complying with Clean Water Act section 303(c)(2)(B)*. Washington, D. C. (Referred to as the "National Toxics Rule, as amended".)

Issues to Address in the Next Triennial Review

We recommend that several aspects of the Basin Plan be addressed in the next triennial review. Many of these issues are common to several or all of the State's basin plans. These issues are described below.

1. **Basin Plan should reflect the "Alaska Rule":** On April 27, 2000, the EPA published a final rule (65 FR 24641) regarding when state water quality standards become effective for CWA purposes (i.e., the "Alaska Rule", named after the court's decision in *Alaska Clean Water Alliance v. Clark*). The rule provides that state water quality standards, or amendments to such standards, submitted for EPA-approval after May 30, 2000 (the effective date of the rule), must be approved by the EPA before such water quality standards or amendments are considered in effect under the CWA. The Basin Plan should be updated to reflect this new interpretation of law (see Chapter 1, pp. 1-1 and 1-5).
2. **Update MUN beneficial use designations:** Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63 state that all surface and ground waters of California must be protected as existing or potential sources of municipal and domestic water supply, with exceptions. The EPA notes that the Basin Plan omits the MUN designation for some inland surface waters and does not explain the basis for these omissions. This

situation should be rectified by assigning the MUN designation to these water bodies, or providing the basis for the exceptions to the MUN designation. We note that the update of MUN beneficial use designations is identified as a high priority basin planning issue in the 1995 triennial review (see Regional Board Resolution No. 95-03).

3. **Update RARE beneficial use designations:** As part of the 1994 update to the Basin Plan, the Regional Board undertook a detailed review of rare, threatened, or endangered species in regional water bodies. At present, the Basin Plan designates many waters for the beneficial use of RARE. As new information becomes available, the Regional Board should update RARE designations for regional water bodies which are found to support plant or animal species designated as rare, threatened, or endangered under State or federal law.
4. **Lack of numeric water quality objectives for all priority toxic pollutants:** The Basin Plan currently lacks adequate numeric water quality objectives for priority toxic pollutants. The EPA recognizes that this issue has been considerably resolved with the promulgation of the California Toxics Rule (CTR). However, as you are likely aware, the EPA is committed to a schedule for re-evaluating the water quality criteria for mercury, selenium, pentachlorophenol, and some metals in the CTR over the next two years. Once this process has been completed, the EPA is committed to proposing revised criteria to amend those in the CTR. The EPA will amend the CTR unless the State and/or Regional Boards adopt new objectives for these pollutants based on EPA's revised criteria guidance. In the interim, if new information suggests that the criteria should be more stringent, we believe that narrative objectives and NPDES permitting regulations at 40 CFR 122.44(d)(1) provide the legal basis for applying this new information in the development of protective water quality based effluent limitations.
5. **Update numeric water quality objectives for bacteria indicator organisms for protection of REC1 beneficial use:** The Basin Plan's water quality objectives for bacteria rely on total and fecal coliform bacteria as indicators of pathogenic bacteria. In 1986, the EPA published criteria guidance recommending the use of *Escherichia coli* (*E. coli*) and enterococci as indicator bacteria. The epidemiological data upon which the criteria guidance are based indicate that *E. coli* and enterococci are better correlated to health effects related to water-contact recreation. The Basin Plan must be revised for consistency with these recommended criteria. The EPA's *Action Plan for Beaches and Recreational Waters* (EPA/600/R-98/079, March 1999) calls for all states to adopt bacterial standards that are consistent with current EPA criteria guidance by 2003. The EPA will promulgate such standards for any state that does not meet this deadline. Regional Board staff have communicated that the water quality objectives for bacteria in the Basin Plan will be updated this summer and that this update will be consistent with *Ambient Water Quality Criteria for Bacteria - 1986* (EPA 440/5-84-002, January 1986).
6. **Update numeric water quality objectives for ammonia:** The Basin Plan's water quality objectives for ammonia (freshwater) rely on *Ambient Water Quality Criteria for Ammonia - 1984*, as revised in 1992. Subsequently, the EPA has updated acute and chronic ambient water quality criteria for ammonia (see *1999 Update of Ambient Water*

Quality Criteria for Ammonia). The Regional Board should update the existing numeric objectives for ammonia based on a consideration of the EPA's 1999 update. The announcement for this update calls for all states to adopt ammonia standards consistent with current EPA criteria guidance by 2004 (see 64 FR 71973, December 22, 1999); the EPA will likely promulgate such standards for any state that does not meet this deadline. In the interim, in those instances where the numeric objective for ammonia is less stringent than the EPA's updated water quality criteria, we believe that the narrative objective for toxicity and NPDES permitting regulations at 40 CFR 122.44(d)(1) provide the legal basis for applying 304(a) criteria in the development of protective water quality based effluent limitations for ammonia.

7. **Adopt numeric water quality objectives for chlorine to facilitate implementation of narrative water quality objective:** To ensure that inland surface waters, enclosed bays, and estuaries are free from toxic concentrations of chlorine, the Regional Board should expand the existing narrative objective for total residual chlorine to include numeric objectives for the protection of aquatic life. These objectives should be based on a consideration of the EPA's recommended numeric criteria guidance for chlorine (see *Ambient Water Quality Criteria for Chlorine - 1984*). In the interim, we believe that the narrative objective for total residual chlorine and NPDES permitting regulations at 40 CFR 122.44(d)(1) provide the legal basis for applying 304(a) criteria in the development of protective water quality based effluent limitations for chlorine (expressed as total residual chlorine). We note that this is identified as a high priority basin planning issue in the 1995 triennial review.
8. **Update nutrient water quality objectives for over-enrichment:** The EPA is currently developing numeric criteria guidance for nutrients applicable to lakes, streams, rivers, wetlands, estuaries, and near coastal waters for protection against eutrophication. Regional Board staff are currently participating on the Regional Technical Advisory Group for the EPA's National Nutrient Criteria Development Program. Criteria guidance should be completed before 2001. Once water body specific guidance and criteria are established, the EPA expects States to adopt numeric nutrient objectives for water bodies not already protected by nutrient objectives for over-enrichment before 2003. To accomplish this goal in the next triennial review, the EPA will assist the Regional Boards in this effort. We note that this is identified as a medium priority basin planning issue in the 1995 triennial review.
9. **Update numeric water quality objectives for dissolved oxygen for protection of WARM and COLD beneficial uses:** The Regional Board should consider optimal levels of dissolved oxygen for various life stages of salmonid fishes and other aquatic species. Criteria recommended by the EPA in 1986 include warm and cold water dissolved oxygen values for embryonic, larval, and other life stages of salmonids (see *Ambient Water Quality Criteria for Dissolved Oxygen*, EPA 440/5-86-003, April 1986).
10. **Update numeric water quality objectives for temperature for protection of salmonid fishes:** In light of recent advances in the understanding of optimal temperatures for salmonid fishes in California, the Basin Plan's temperature objectives should be re-


evaluated to ensure the protection of salmonids. It is the EPA's current policy to protect the most sensitive species in the water body by season. For salmonids, reproductive seasons are of particular importance; migration is also a critical period. Optimal temperature values are currently available for the survival and growth of all life stages for various salmonid species. We strongly urge the Regional Board to update temperature criteria to protect salmonids, as needed. We note that this is identified as a low priority basin planning issue in the 1995 triennial review.

11. **Update implementation procedures for narrative and numeric water quality objectives for acute and chronic toxicity:** The Basin Plan currently includes a general narrative objective for toxicity, narrative and numeric objectives for acute toxicity, and a narrative objective for chronic toxicity. The State Board has recently adopted *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* which significantly supplements implementation procedures for chronic toxicity. The Regional Board should evaluate the combined requirements of this policy, in conjunction with the EPA's *Technical Support Document for Water Quality-based Toxics Control and Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs*, to determine what further actions are needed to update or supplement Basin Plan objectives and implementation procedures for toxicity. Implementation procedures for narrative toxicity objectives in NPDES permits must be consistent with NPDES regulations at 40 CFR 122.44(d)(1). We note that this is identified as a medium priority basin planning issue in the 1995 triennial review.
12. **Develop and adopt biological criteria:** The Regional Board is initiating a program for conducting baseline surveys to support the development and adoption of biological criteria (biocriteria) for inclusion in the Basin Plan. We strongly encourage the Regional Board to continue moving forward with this effort. Development of biocriteria is identified in the EPA's interim draft *Water Quality Criteria and Standards Plan - Priorities for the Future* (EPA 822-R-98-003, June 1998) as one of six priority objectives for the water quality standards program over the next decade. Consistent with this priority, the EPA seeks to work with the State through grants and technical assistance to ensure progress towards realizing the full potential of bioassessments and biocriteria for managing water quality and protecting aquatic life in all water bodies. We note that this is identified as a medium priority basin planning issue in the 1995 triennial review.
13. **Total Maximum Daily Load (TMDL) actions and Basin Plan amendments:** The Basin Plan should incorporate any water quality standards which have been newly adopted or revised as part of TMDL actions for water bodies within the Los Angeles Region. Regional Board staff have communicated that TMDLs adopted by the Regional Board will be incorporated into a new Chapter 7 of the Basin Plan.
14. **Update Antidegradation Policy:** At present, the Basin Plan includes State Board Resolution No. 68-16, as the State's antidegradation policy. The discussion of implementation of the State's antidegradation policy should be expanded to clarify that the State has, in State Board Order 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation

policy. In addition, the Basin Plan discussion of antidegradation should be expanded to more fully address how the policy is applied to nonpoint sources.

The EPA intends to continue working closely with the Regional Board during the triennial review process. Our aim is to take prompt action on any further Basin Plan amendments and assist the Regional Board as needed. Again, the EPA commends the Regional Board for its dedication and success in revising the Basin Plan. If there are any questions regarding our action, please contact Robyn Stuber, of my staff, at 415/744-1921. As always, we look forward to continued cooperation with the State in achieving our mutual environmental goals.

Sincerely,


Alexis Strauss
Director, Water Division

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