

CWC Sections 13146 and 13247 require that the Board in carrying out activities which affect water quality shall comply with state policy for water quality control unless otherwise directed by statute, in which case they shall indicate to the State Board in writing their authority for not complying with such policy. The State Board has adopted the Antidegradation Policy (Resolution 68-16), which the Regional Board has incorporated into its Basin Plan. The Regional Board is required by the CWC to comply with the Antidegradation Policy.

Section 101(a) of the Clean Water Act (CWA), the basis for the antidegradation policy, states that the objective of the Act is to "restore and maintain the chemical, biological and physical integrity of the nation's waters." Section 303(d)(4) of the CWA carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR § 131.12 before taking action to lower water quality. These regulations (40 CFR § 131.12(a)) describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy as well as implementing procedures.

California's antidegradation policy is composed of both the federal antidegradation policy and the State Board's Resolution 68-16 (State Water Resources Control Board, Water Quality Order 86-17, p. 20 (1986) ("Order 86-17"); Memorandum from Chief Counsel William Attwater, SWRCB to Regional Board Executive Officers, "federal Antidegradation Policy," pp. 2, 18 (Oct. 7, 1987) ("State Antidegradation Guidance")). As a state policy, with inclusion in the Water Quality Control Plan (Basin Plan), the antidegradation policy is binding on all of the Regional Boards (Water Quality Order 86-17, pp. 17-18).

Implementation of the state's antidegradation policy is guided by the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 ("APU 90-004") and USEPA Region IX, "Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12" (3 June 1987) ("Region IX Guidance"), as well as Water Quality Order 86-17.

The Regional Board must apply the antidegradation policy whenever it takes an action that will lower water quality (State Antidegradation Guidance, pp. 3, 5, 18, and Region IX Guidance, p. 1). Application of the policy does not depend on whether the action will actually impair beneficial uses (State Antidegradation Guidance, p. 6). Actions that trigger use of the antidegradation policy include issuance, re-issuance, and modification of NPDES and Section 404 permits and waste discharge requirements, waiver of waste discharge requirements, issuance of variances, relocation of discharges, issuance of cleanup and abatement orders, increases in discharges due to industrial production and/or municipal growth and/or other sources, exceptions from otherwise applicable water quality objectives, etc. (State Antidegradation Guidance, pp. 7-10, Region IX Guidance, pp. 2-3). Both the state and federal policies apply to point and nonpoint source pollution (State Antidegradation Guidance p. 6, Region IX Guidance, p. 4).

The State Board's APU 90-004 specifies guidance to the Regional Boards for implementing the state and federal antidegradation policies and guidance. The guidance establishes a two-tiered process for addressing these policies and sets forth two levels of analysis: a simple analysis and a complete analysis. A simple analysis may be employed where a Regional Board determines that: 1) a reduction in water quality will be spatially localized or limited with respect to the waterbody, e.g. confined to the mixing zone; 2) a reduction in water quality is temporally limited; 3) a proposed action will produce minor effects which will not result in a significant reduction of water quality; and 4) a proposed activity has been approved in a General Plan and has been adequately subjected to the environmental and economic analysis required in an EIR. A complete antidegradation analysis is required if discharges would result in: 1) a substantial increase in mass emissions of a constituent; or 2) significant mortality, growth impairment, or reproductive impairment of resident species. Regional Boards are advised to apply stricter scrutiny to non-threshold constituents, i.e., carcinogens and other constituents that are deemed to present a risk of source magnitude at all non-zero concentrations. If a Regional Board cannot find that the above determinations can be reached, a complete analysis is required.

Even a minimal antidegradation analysis would require an examination of: 1) existing applicable water quality standards; 2) ambient conditions in receiving waters compared to standards; 3) incremental changes in constituent loading, both concentration and mass; 4) treatability; 5) best practicable treatment and control (BPTC); 6) comparison of the proposed increased loadings relative to other sources; 7) an assessment of the significance of changes in ambient water quality and 8) whether the waterbody was a ONRW. A minimal antidegradation analysis must also analyze whether: 1) such degradation is consistent with the maximum benefit to the people of the state; 2) the activity is necessary to accommodate important economic or social development in the area; 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved; and 4) resulting water quality is adequate to protect and maintain existing beneficial uses. A BPTC technology analysis must be done on an individual constituent basis.

Any antidegradation analysis must comport with implementation requirements in State Board Water Quality Order 86-17, State Antidegradation Guidance, APU 90-004 and Region IX Guidance. The conclusory, unsupported, undocumented statements in the Permit are no substitute for a defensible antidegradation analysis.

There is nothing resembling an analysis buttressing the unsupported claim that BPTC is being provided. An increasing number of wastewater treatment plants around the country and state are employing reverse-osmosis (RO), or even RO-plus. At a minimum tertiary treatment can be considered BPTC based solely on the number of wastewater treatment plants in the Central Valley required to treat to this level. Clearly, micro or nano filtration can be considered BPTC for wastewater discharges of impairing pollutants into critically sensitive ecological areas

containing listed species that are already suffering serious degradation. If this is not the case, the antidegradation analysis must explicitly detail how and why a run-of-the-mill secondary system can be considered BPTC.

There is nothing in the Permit resembling an analysis that ensures that existing beneficial uses are protected. While the Permit identifies the constituents that are included on the 303(d) list as impairing receiving waters, it fails to discuss how and to what degree the identified beneficial uses will be additionally impacted by the discharge. In fact, there is almost no information or discussion on the composition and health of the identified beneficial uses. Any reasonably adequate antidegradation analysis must discuss the affected beneficial uses (i.e., numbers and health of the aquatic ecosystem; extent, composition and viability of agricultural production; people depending upon these waters for water supply; extent of recreational activity; etc.) and the probable effect the discharge will have on these uses.

In addition to the above, the Antidegradation Policy discussion has not addressed the following:

- The receiving water is impaired (303(d) listed) for unknown toxicity. The allowance to discharge copper in acutely toxic concentrations allows the impaired receiving stream to be further degraded and is contrary to the recommendations of the TSD and the requirements of the SIP.
- According to the Fact Sheet, Ammonia, the acute criterion for ammonia is 2.14 mg/l prior to allowing mixing. The Permit Effluent Limitation for ammonia is 30 mg/l as a daily maximum. The receiving water is impaired (303(d) listed) for unknown toxicity. The allowance to discharge ammonia in acutely toxic concentrations allows the impaired receiving stream to be further degraded and is contrary to the recommendations of the TSD and the requirements of the SIP.
- Nitrate is allowed to be discharged up to 126 mg/l as a daily maximum and 73 mg/l as a monthly average under the Permit. Nitrate is generally discharged into a domestic wastewater treatment plant in the form of ammonia which is intentionally converted in a process called nitrification. Nitrate is a subset of ammonia; it would be rare for nitrate levels to exceed original ammonia concentrations. According to Metcalf & Eddy, Wastewater Engineering, Fourth Edition, a widely respected engineering text, a high strength wastewater will have ammonia concentrations up to 45 mg/l and there should be no influent nitrate. According to the literature values; the discharger would have to add ammonia or nitrate to the wastestream to ever reach the allowed discharge concentration. Nitrate concentrations above 10 mg/l exceed the drinking water maximum contaminant level (MCL). There is no discussion of the distance of drinking water impairment. There is no discussion of biostimulation, nitrogen compounds are nutrients; biostimulatory substances are limited by Basin Plan water quality objectives.

- The nitrogen compounds and the resulting biostimulation will impact dissolved oxygen concentrations within the receiving stream. While the Permit discusses limiting BOD as an oxygen demanding substance; there is no such discussion for nitrogen compounds. Failure to discuss nitrogenous oxygen demand to a receiving stream that is impaired for dissolved oxygen is appalling.
- The Permit contains an Effluent Limitation for temperature: "The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20o F" and a Receiving Water Limitation which requires that the discharge shall not cause: "A surface water temperature rise greater than 4o F above the natural temperature of the receiving water at any time or place". A discharge in compliance with the temperature Effluent Limitation at 20o F above the receiving water temperature will violate the receiving water Limitation of 4o F. The mixing zone allowance for temperature does not discuss how compliance with the Receiving Water Limitation will be achieved under the allowed effluent parameter for temperature.
- The Permit fails to include a protective Effluent Limitation for EC despite the impaired receiving stream.
- The effluent Limitation for TDS has been removed from the existing permit.
- The effluent limitation for chloride has been removed from the existing permit.
- The effluent limitation for settleable solids has been removed from the existing permit.
- There is no effluent limitation for aluminum despite a clear reasonable potential to exceed waste quality objectives.
- There is no effluent limitation for manganese despite a clear reasonable potential to exceed water quality objectives.
- The drinking water beneficial use is not protected for pathogens and tertiary treatment, which can be considered BPTC, is not being required.
- The discharge has exhibited chronic toxicity and the Permit only proposes to raise the "trigger" rather than identify the toxic constituent for a discharge to a receiving stream which is impaired for unknown toxicity.
- There is no discussion of groundwater quality and the possible degradation from sludge disposal or why the requirements of Title 27 for sludge disposal are not being applied. Dewatering with off site disposal can be considered BPTC and is not being required.

The antidegradation analysis in the Permit is not simply deficient, it is literally nonexistent. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist only of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis. NPDES permits must include any more stringent effluent limitation necessary to implement the Regional Board Basin Plan (Water Code 13377). The Tentative Permit fails to properly implement the Basin Plan's Antidegradation Policy.

##### **5. THE MANNER IN WHICH THE PETITIONERS ARE AGGRIEVED.**

CSPA is a non-profit, environmental organization that has a direct interest in reducing pollution to the waters of the Central Valley. CSPA's members benefit directly from the waters in the form of recreational hiking, photography, fishing, swimming, hunting, bird watching, boating, consumption of drinking water and scientific investigation. Additionally, these waters are an important resource for recreational and commercial fisheries. Central Valley waterways also provide significant wildlife values important to the mission and purpose of the Petitioners. This wildlife value includes critical nesting and feeding grounds for resident water birds, essential habitat for endangered species and other plants and animals, nursery areas for fish and shellfish and their aquatic food organisms, and numerous city and county parks and open space areas. CSPA's members reside in communities whose economic prosperity depends, in part, upon the quality of water. CSPA has actively promoted the protection of fisheries and water quality throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore declining aquatic resources. CSPA member's health, interests and pocketbooks are directly harmed by the failure of the Regional Board to develop an effective and legally defensible program addressing discharges to waters of the state and nation.

**6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH PETITIONER REQUESTS.**

Petitioners seek an Order by the State Board to:

- A. Vacate Order No. R5-2008-0179 (NPDES No. CA0078590) and remand to the Regional Board with instructions prepare and circulate a new tentative order that comports with regulatory requirements.
- B. Alternatively, prepare, circulate and issue a new order that is protective of identified beneficial uses and comports with regulatory requirements.

**7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION.**

CSPA's arguments and points of authority are adequately detailed in the above comments and our 23 October 2008 letter. Should the State Board have additional questions regarding the issues raised in this petition, CSPA will provide additional briefing on any such questions. The petitioners believe that an evidentiary hearing before the State Board will not be necessary to resolve the issues raised in this petition. However, CSPA welcomes the opportunity to present oral argument and respond to any questions the State Board may have regarding this petition.

**8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE APPROPRIATE REGIONAL BOARD AND TO THE DISCHARGERS, IF NOT**

**THE PETITIONER.**

A true and correct copy of this petition, without attachment, was sent electronically and by First Class Mail to Ms. Pamela Creedon, Executive Officer, Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, CA 95670-6114. A true and correct copy of this petition, without attachment, was sent to the Discharger in care of: Mr. Virgil Koehne, General Manager, Town of Discovery Bay, 1800 Willow Lake Road, Discovery Bay, CA 94505.

9. **A STATEMENT THAT THE ISSUES RAISED IN THE PETITION WERE PRESENTED TO THE REGIONAL BOARD BEFORE THE REGIONAL BOARD ACTED, OR AN EXPLANATION OF WHY THE PETITIONER COULD NOT RAISE THOSE OBJECTIONS BEFORE THE REGIONAL BOARD.**

CSPA presented the issues addressed in this petition to the Regional Board in 23 October 2008 comment letter that was accepted into the record.

If you have any questions regarding this petition, please contact Bill Jennings at (209) 464-5067 or Michael Jackson at (530) 283-1007.

Dated: 2 January 2009

Respectfully submitted,



Bill Jennings, Executive Director  
California Sportfishing Protection Alliance

Attachment No. 1: Order No. R5-2008-0179

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**

**CENTRAL VALLEY REGION**

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114  
 Phone (916) 464-3291 • FAX (916) 464-4645  
 http://www.waterboards.ca.gov/centralvalley

**ORDER NO. R5-2008-0179**  
**NPDES NO. CA0078590**

**WASTE DISCHARGE REQUIREMENTS  
 FOR THE  
 TOWN OF DISCOVERY BAY CSD  
 DISCOVERY BAY WASTEWATER TREATMENT PLANT  
 CONTRA COSTA COUNTY**

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	Town of Discovery Bay CSD
<b>Name of Facility</b>	Discovery Bay Wastewater Treatment Plant
<b>Facility Address</b>	1800 Willow Lake Road
	Discovery Bay, CA 94505
	Contra Costa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the Town of Discovery Bay CSD from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
001	Treated Municipal Wastewater	37° 53' 08" N	121° 34 ' 30 " W	Old River

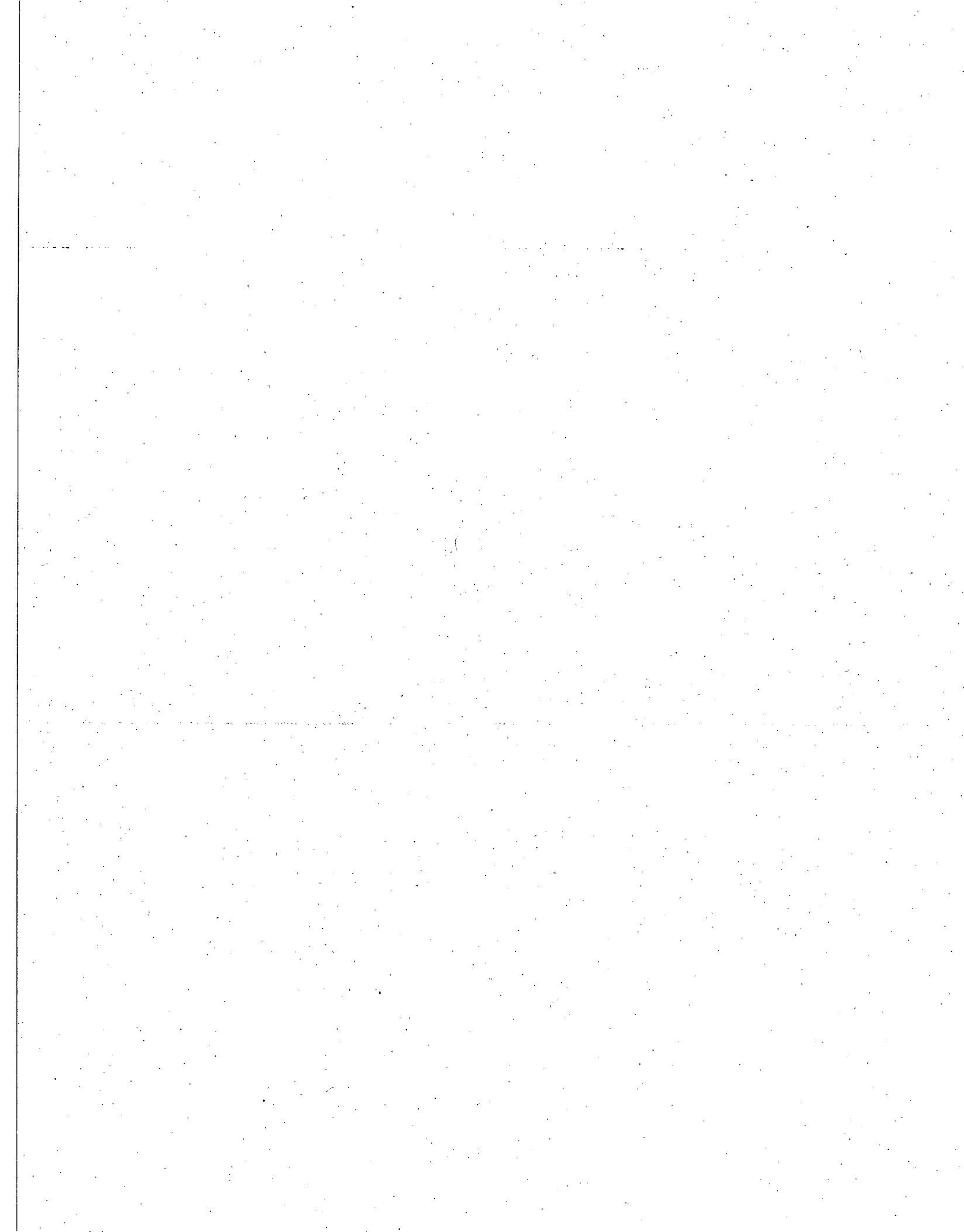
**Table 3. Administrative Information**

This Order was adopted by the Regional Water Quality Control Board on:	<b>4 December 2008</b>
This Order shall become effective on:	<b>23 January 2009</b>
This Order shall expire on:	<b>30 November 2008</b>
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<b>180 days prior to the Order expiration date</b>

IT IS HEREBY ORDERED, that Order No. R5-2003-0067 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 4 December 2008.

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 ORIGINAL SIGNED BY  
 PAMELA C. CREEDON, Executive Officer





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## I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

<b>Discharger</b>	Town of Discovery Bay CSD
<b>Name of Facility</b>	Discovery Bay Wastewater Treatment Plant
<b>Facility Address</b>	1800 Willow Lake Road
	Discovery Bay CA 94505
	Contra Costa County
<b>Facility Contact, Title, and Phone</b>	Virgil Koehne, General Manager Town of Discovery Bay CSD, 925-634-1131
<b>Mailing Address</b>	SAME
<b>Type of Facility</b>	Publicly Owned Treatment Works
<b>Facility Design Flow</b>	2.1 million gallons per day (mgd) (dry weather)

## II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

**A. Background.** The Town of Discovery Bay CSD [hereinafter Discharger] is currently discharging pursuant to Order No. R5-2003-0067 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078590. The Discharger submitted a Report of Waste Discharge and applied for a NPDES permit renewal to discharge up to 2.1 mgd of treated wastewater from the Discovery Bay Wastewater Treatment Plant, hereinafter Facility.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

**B. Facility Description.** The Town of Discovery Bay CSD (hereinafter Discharger) owns the Discovery Bay Wastewater Treatment Plant, hereinafter Facility, a publicly owned treatments works (POTW) which serves a population of approximately 16,000 people. Southwest Water Company is under contract to operate the Facility which serves a population of approximately 16,000 people. The treatment system includes two plants (Plant 1 and Plant 2) which each consist of a Hycor headworks screen, an oxidation ditch, two secondary clarifiers, and a shared UV disinfection system. Plant 1 also includes a flow equalization and storage basin (labeled "Emergency Overflow Basin" on Attachment C). The influent flow is split between the two plants, and treated effluents rejoin at the shared UV disinfection system at Plant 2. Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Old River, a water of the United States, within the San Joaquin Delta Hydrologic Unit. Sludge handling is located at

Plant 2 and consists of an aerated, clay lined lagoon (referred to as an aerobic digester), two clay lined sludge lagoons, a belt filter press, and two greenhouse solar drying beds. After processing, samples are taken of the dried biosolids to ensure they conform to Class A standards based on the regulations found at 40 CFR Part 503. Sludge is stored on site in the solar drying bed building or adjacent to the building. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and H are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)<sup>1</sup> require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 and/or Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. Water Quality-based Effluent Limitations.** Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been

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<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

**H. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised August 2006), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to Old River are as follows:

**Table 5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Old River	<p><u>Existing:</u></p> <ul style="list-style-type: none"> <li>• Municipal and Domestic Water Supply (MUN);</li> <li>• Agricultural Supply (AGR);</li> <li>• Industry Process Supply (PRO);</li> <li>• Industry Service Supply (IND);</li> <li>• Contact Recreation (REC-1);</li> <li>• Non-contact Recreation (REC-2);</li> <li>• Warm Freshwater Habitat (WARM);</li> <li>• Cold Freshwater Habitat (COLD);</li> <li>• Migration of Aquatic Organisms (MIGR);</li> <li>• Spawning, Reproduction, and/or Early Development (SPWN);</li> <li>• Wildlife Habitat (WILD);</li> <li>• Navigation (NAV)</li> </ul>

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)." The Basin Plan also states, "Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." The listing for Old River between the San Joaquin River and the Delta Mendota Canal is listed as a WQLS for low dissolved oxygen in the 303(d) list of impaired water bodies; this segment of Old River is south of the discharge point. The Old River falls within the southern portion of the Delta Waterways, which is also 303(d)

listed for chlorpyrifos, DDT, diazinon, electrical conductivity, exotic species, Group A pesticides, mercury, and unknown toxicity.

The State Water Resources Control Board adopted the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (revised) 13 December 2006, which, in part, establishes salinity-related water quality objectives in the Bay-Delta.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. **Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was September 25, 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality

objective. This conclusion is also consistent with the United States Environmental Protection Agency policies and administrative decisions. See, e.g., Whole Effluent Toxicity (WET) Control Policy. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to Water Code section 13300 or a Cease and Desist Order pursuant to Water Code section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet.

**L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000); codified at 40 C.F.R. § 131.21] Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

**M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

This Order contains pollutant restrictions that are more stringent than applicable federal requirements and standards. Specifically, this Order includes effluent limitations for

BOD<sub>5</sub> and TSS that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or to protect beneficial uses. The rationale for including these limitations is explained in Section IV.B.2.a of the Fact Sheet. In addition, the Regional Water Board has considered the factors in Water Code section 13241 in Section IV.B.2.a of the Fact Sheet.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 1 May 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and

reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

**Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

**R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, V.B, and VI.C.2.b of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

**S. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

**T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. DISCHARGE PROHIBITIONS

- A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.
- D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.



#### IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

##### A. Effluent Limitations – Discharge Point 001

##### 1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

- a. The Discharger shall maintain compliance with the final effluent limitations specified in Table 6:

**Table 6. Final Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD 5-day @ 20°C	mg/L	20	40	50	---	---
	lbs/day <sup>[1]</sup>	350	700	875	---	---
Total Suspended Solids	mg/L	30	40	50	---	---
	lbs/day <sup>[1]</sup>	525	700	875	---	---
pH	standard units	---	---	---	6.5	8.5
Copper	µg/L	50	---	70	---	---
Nitrate (as N)	mg/L	73	---	126	---	---
Ammonia	mg/L	10	---	30	---	---
	lbs/day <sup>[1]</sup>	177	---	525	---	---

[1] Calculated with the following formula: 8.345 x concentration x flow, using a design flow of 2.1 mgd.

- b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
- c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
- i. 70%, minimum for any one bioassay; and
  - ii. 90%, median for any three consecutive bioassays.
- d. **Temperature.** The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.

e. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

- i. 23 most probable number (MPN) per 100 mL, as a 7-day median; and
- ii. 240 MPN/100 mL, more than once in any 30-day period.

f. **Average Daily Discharge Flow.** The Average Daily Discharge Flow shall not exceed 2.1 mgd.

g. **Electrical Conductivity.**

- i. The electrical conductivity in the discharge shall not exceed an annual average of 2,100  $\mu$ mhos/cm;
- ii. If the Discharger fails to comply with the requirements in 1) or 2), below, the effluent electrical conductivity shall not exceed 1000  $\mu$ mhos/cm, as a monthly average:

- 1) The Discharger shall develop and submit a Salinity Plan as specified in Provision VI.C.3.a; and
- 2) The Discharger shall timely implement the Salinity Plan upon the Regional Water Board's approval. The proposed Salinity Plan will be circulated for no less than 30 days for public comment prior to the Regional Water Board's consideration of the Salinity Plan. The Regional Water Board may revise the Salinity Plan prior to final approval.

Upon determination by the Regional Water Board that the Discharger has materially failed to comply with the approved Salinity Plan due to circumstances within its control, the monthly average effluent limitations for electrical conductivity specified in h.ii., above, shall become effective immediately.

h. **Total Recoverable Iron.** Effluent total recoverable iron shall not exceed 300  $\mu$ g/L, as an annual average.

i. **Aluminum.** Effluent total recoverable aluminum concentrations shall not exceed 200  $\mu$ g/L, as an annual average.

## 2. Interim Effluent Limitations

Not Applicable

## B. Land Discharge Specifications

Not Applicable.

## C. Reclamation Specifications

Not Applicable.

## V. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Old River:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen.** The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
8. **pH.** The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5. A one-month averaging period may be applied when calculating the pH change of 0.5.

**9. Pesticides:**

- a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
- b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
- c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;
- d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.);
- e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;
- f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15;
- g. Thiobencarb to be present in excess of 1.0 µg/L.

**10. Radioactivity:**

- a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
- b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

**11. Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

**12. Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

**13. Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

**14. Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

**15. Temperature.** The Thermal Plan is applicable to this discharge. The Thermal Plan requires that the discharge shall not cause the following in Old River:

- a. The creation of a zone, defined by water temperatures of more than 1 °F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of the river channel at any point.

- b. A surface water temperature rise greater than 4 °F above the natural temperature of the receiving water at any time or place.
16. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
17. **Turbidity.** The turbidity to increase as follows:
- a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
  - b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
  - c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
  - d. More than 10 percent where natural turbidity is greater than 100 NTUs.

#### **B. Groundwater Limitations**

1. Release of waste constituents from any storage, treatment, or disposal component associated with the WWTP shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the WWTP to contain waste constituents in concentrations in excess of natural background quality or cause the following in groundwater:
  - a. Beneficial uses to be adversely impacted or water quality objectives to be exceeded; and
  - b. Total coliform organisms median of 2.2 MPN/100 mL over any seven-day period.

### **VI. PROVISIONS**

#### **A. Standard Provisions**

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
  - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.
  - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    - (i) violation of any term or condition contained in this Order;

- (ii) obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
- (iii) a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
- (iv) a material change in the character, location, or volume of discharge.

The causes for modification include:

*New regulations.* New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

*Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

*Change in sludge use or disposal practice.* Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
  - (i) contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
  - (ii) controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal, and adequate public notification to downstream water agencies or others who might contact the non-complying discharge.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
  - (i) The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
  - (ii) Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
  - (iii) Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction,

loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

- i) Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
- ii) Evaluate the effectiveness of present facilities and procedures and state when they became operational.
- iii) Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California



Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

- n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
- s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- u. For POTWs, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211).
- v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291

within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40.CFR section 122.41(l)(6)(i)].

## **B. Monitoring and Reporting Program (MRP) Requirements**

1. The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

## **C. Special Provisions**

### **1. Reopener Provisions**

- a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:
  - a. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
  - b. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- c. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened and an effluent concentration limitation imposed.
- d. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.
- e. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal

translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for inorganic constituents. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

- f. **Ammonia Studies.** The ammonia effluent limitations in this Order are based on USEPA's recommended National Ambient Water Quality Criteria for protection of freshwater aquatic life. However, studies are ongoing to evaluate the effect of ammonia on the inhibition of growth of freshwater diatoms in the Delta, as well as, studies to evaluate the sensitivity of delta smelt to ammonia toxicity. Based on the result of these or other studies, this Order may be reopened to modify the ammonia effluent limitations, as appropriate.
- g. **Regional Monitoring Program.** The State and Regional Water Boards are committed to creation of a coordinated Regional Monitoring Program to address receiving water monitoring in the Delta for all Water Board regulatory and research programs. When a Regional Monitoring Program becomes functional, this permit may be reopened to make appropriate adjustments in permit-specific monitoring to coordinate with the Regional Monitoring Program.
- h. **Central Valley Drinking Water Policy.** If water quality objectives are adopted for organic carbon, nutrients, salinity, bromide, or pathogens to protect drinking water supplies in the Central Valley Region, this Order may be reopened for addition and/or modification of effluent limitations and requirements, as appropriate, to require compliance with the applicable water quality objectives.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

- i. **Toxicity Reduction Evaluation (TRE) Work Plan. Within 90 days of the effective date of this Order**, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with EPA guidance<sup>2</sup> and be of adequate detail to allow the Discharger to immediately initiate a TRE as required in this Provision.
- ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during accelerated monitoring demonstrate a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.
- iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is **10 TUc** (where  $TUc = 100/NOEC$ ). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.
- iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a six-week period (i.e. one test every two weeks) using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:
  - a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.
  - b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

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<sup>2</sup> See Attachment F (Fact Sheet) Section VII.B.2.a. for a list of EPA guidance documents that must be considered in development of the TRE Workplan.

- c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
- 1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
  - 2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
  - 3) A schedule for these actions.

### 3. Best Management Practices and Pollution Prevention

- a. **Salinity Plan.** The Discharger shall develop and implement a Salinity Plan to reduce its salinity impacts to the Delta in accordance with conditions i-iv below.
- i. The Discharger shall implement all reasonable steps to obtain alternative, lower salinity water supply sources; and
  - ii. The Discharger shall develop and implement a salinity source control program that will identify and implement measures to reduce salinity in discharges from residential, commercial, industrial, and infiltration sources in an effort to meet the salinity reduction goal specified in Provision VI.C.3.c of this Order. As a part of its source control program, the Discharger shall develop and implement a pollution prevention plan for salinity in accordance with CWC section 13263.3(d)(3) (See section VII.B.3.a of the Fact Sheet for minimum requirements); and
  - iii. The Discharger shall participate financially in the development of the Central Valley Salinity Management Plan at a level commensurate with its contributions of salinity to the Delta; and
  - iv. The Discharger shall comply with the following schedule:

<u>Task</u>	<u>Compliance Date</u>
1 - Submit to the Regional Water Board for approval by the Executive Officer a draft Salinity Work Plan to reduce salinity impacts to the Delta.	<b>Within 6 months</b> following the effective date of this Order.
2 - Submit Final Salinity Work Plan.	No longer than <b>60 days</b> following approval of Task 1.

- b. **Mercury Evaluation Program.** The Discharger shall continue implementation of the existing mercury evaluation program. Annual progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1)
- c. **Salinity Reduction Goal.** The Discharger shall provide annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to the Old River. The Regional Water Board finds that an annual average salinity goal of the maximum weighted average electrical conductivity of the Discharger's water supply, plus an increment of 500  $\mu\text{mhos/cm}$  for typical consumptive use, is a reasonable intermediate goal that can be achieved through the proper implementation of a pollution prevention plan. The Discharger shall submit annual progress reports in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.)

#### 4. Construction, Operation and Maintenance Specifications

##### a. Treatment Pond Operating Requirements.

1. The sludge ponds shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
3. Ponds shall be managed to prevent breeding of mosquitoes. In particular;
  - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized.
  - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
4. Freeboard in the ponds shall not be less than two feet (measured vertically to the lowest point of overflow), except if lesser freeboard does not threaten the integrity of the pond, no overflow of the pond occurs, and lesser freeboard is due to direct precipitation or storm water runoff occurring as a result of annual precipitation with greater than a 100-year recurrence interval, or a storm event with an intensity greater than a 25-year, 24-hour storm event.
5. Ponds shall have sufficient capacity to accommodate allowable sludge flow and design seasonal precipitation. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

6. Prior to the onset of the rainy season of each year, available pond storage capacity shall at least equal the volume necessary to comply with 5, above.
7. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the disposal areas or property owned by this Discharger.

**b. Ultraviolet Disinfection (UV) System Operating Specifications**

The Discharger shall operate the UV disinfection system to provide the minimum UV dose specified in disinfection system design, unless otherwise approved by the California Department of Public Health, and shall maintain an adequate dose for disinfection while discharging to Old River, unless otherwise approved by the California Department of Public Health.

- The Discharger shall provide continuous, reliable monitoring of flow; UV transmittance, and UV power.
- The quartz sleeves and cleaning system components must be visually inspected per the manufacturer's operations manual for physical wear (scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.
- The lamp sleeves must be cleaned periodically as necessary to meet the requirements.
- Lamps must be replaced per the manufacturer's operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.
- The facility must be operated in accordance with an operations and maintenance program that assures adequate disinfection.

**5. Special Provisions for Municipal Facilities (POTWs Only)**

**a. Pretreatment Requirements.**

Not Applicable

**b. Sludge/Biosolids Discharge Specifications**

- i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste

discharge requirements issued by a regional water quality control board will satisfy these specifications.

- ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.
- iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B.
- iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

**c. Biosolids Disposal Requirements**

- i. The Discharger shall comply with the Monitoring and Reporting Program for biosolids disposal contained in Attachment E.
- ii. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and U.S. EPA Regional Administrator at least **90 days** in advance of the change.
- iii. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

**d. Biosolids Storage Requirements**

- i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.
- ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.