

**Section 4 – Camanche Reservoir South Shore Recreation Area WWTF  
Laboratory Service Request**

**B762-0206-1**

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**Section 4 – Camanche Reservoir South Shore Recreation Area WWTF  
Copy of NPDES Permit and Attachments**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0070

WASTE DISCHARGE REQUIREMENTS  
FOR  
EAST BAY MUNICIPAL UTILITY DISTRICT  
CAMANCHE RESERVOIR SOUTH SHORE RECREATION AREA  
WASTEWATER TREATMENT PLANT  
CALAVERAS COUNTY

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

1. The East Bay Municipal Utility District (EBMUD; hereafter Discharger) submitted a Report of Waste Discharge (RWD), dated 17 January 2002 for updating Waste Discharge Requirements (WDRs) for the Camanche Reservoir South Shore Recreation Area wastewater treatment plant.
2. For the purposes of this Order, the term “wastewater treatment plant” (WWTP) shall mean the sewage collection and transport system, and the wastewater treatment and storage/disposal ponds.
3. WDRs Order No. 86-155, adopted by the Regional Board on 8 August 1986, prescribe requirements for the Discharger’s WWTP. This Order is neither adequate nor consistent with the current plans and policies of the Regional Board.

Existing Wastewater Treatment and Disposal System

4. The Camanche Reservoir South Shore Recreation Area WWTP is on assessors parcel number 48-001-7 and is owned and operated by the Discharger. The facility is at the southeast end of Camanche Reservoir approximately six miles west of the town of Valley Springs, in Section 7, T4N, R10E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference.
5. The WWTP treats domestic wastewater generated from EBMUD’s Camanche Reservoir South Shore Recreation Area, which serves 278 mobile home/recreational vehicle (RV) connections, 299 campsites, seven rental cottages, two RV disposal sites, a snack bar, a fish cleaning station, and a public laundry facility. The majority of the mobile homes belong to year round residents. According to information presented in the RWD, the estimated maximum daily wastewater generation is approximately 56,000 gallons per day (gpd), which occurs during summer holiday weekends. Maximum wastewater flows were estimated based on a site user inventory of existing facilities.

The wastewater treatment system consists of a gravity and force main sanitary sewer collection system and three wastewater ponds, as shown on Attachment B, which is attached hereto and made part of this Order by reference. Ponds 1 and 2 provide primary treatment and are equipped with floating mechanical aerators. Wastewater flows from Pond 1 to Pond 2, and then from Pond 2 to Pond 3. Pond 3 provides storage and disposal through evaporation and percolation. The combined capacity of all three ponds is approximately 6.56 million gallons.

The wastewater ponds are surrounded by several recreational surface water bodies (ponds), as shown in Attachment B. The Catfish Pond, Catfish Pond Annex, and Trout Pond, located north, northeast, and southeast of the wastewater ponds, respectively, are used for fish breeding by EBMUD’s Natural Resources Department and by the public for recreational fishing. The Western Pond (located west of the wastewater ponds) receives overflow water from the Catfish Pond. The seasonal pond located southeast of the wastewater ponds receives surface water from direct rainfall and runoff from the surrounding areas. The wastewater ponds are separated from the surrounding freshwater ponds by a levee system.

Prior to the development of the Camanche Reservoir South Shore Recreation Area, Pacific Clay Products (PCP) mined clay and silica sands from open pits excavated in the vicinity of the wastewater ponds and recreational ponds. Several of the mining pits and process ponds developed during the PCP operations were flooded to construct the recreational ponds and the wastewater ponds. Fill from the mining operations was used to construct

the levees surrounding the wastewater ponds, and to construct the foundation of a landfill, which is just east of the wastewater ponds. The landfill was used to dispose of municipal and green waste from 1967 to 1984. The landfill was regulated by WDRs Order 87-119, which was rescinded in 1997 when the landfill was closed.

As part of the landfill closure activities, an extensive field investigation was conducted. The Discharger researched the geological history of the site, sampled groundwater wells, and characterized groundwater quality relative to potential impacts from the landfill. Data collected as part of the field investigation indicate that the wastewater ponds are partially underlain by native bedrock.

The Discharger notified the RWQCB on 19 July 2001 of maintenance activities to repair extensive erosion from wave action on the inboard wastewater pond levees. Repairs included clearing the levee face of any vegetation, excavating sloughed soil, reinforcing the levee face with riprap, and installing erosion control fabric. The work also included installation of flow meters. As of March 2002, the influent flow meters were not operational due to a lack of power.

The previous WDRs contained a 30-day average dry weather flow limit of 82,160 gpd. However, the water balance submitted with the RWD shows that the three wastewater ponds can only dispose of a monthly average flow of 45,000 gpd. The Discharger has stated that it believes that flows into the wastewater treatment ponds are greater than 45,000 gpd and has requested that a higher flow limit be incorporated into the WDRs. The basis for the request is that water use in the recreation area is significantly higher than 45,000 gpd, and that certain assumptions were made for the water balance's wastewater inflows and pond percolation rates. Because there are so many unknowns, this Order does not contain a flow limit. However, the Discharger is required to complete field measurements to verify the assumptions made in the water balance, submit a revised water balance, and prepare a contingency plan to be used in the event that there is less than two feet of freeboard in the ponds.

The Discharger collected one sample from each of the wastewater ponds on 18 December 2001. The results are as follows:

<u>Parameter</u>	<u>Units</u>	<u>Pond #1</u>	<u>Pond #2</u>	<u>Pond #3</u>
Biological Oxygen Demand	mg/l	43	23	13
Total Dissolved Solids <sup>1</sup>	mg/l	285	193	180
Total Phosphate	mg/l	3.2	2.7	1.1
Dissolved Orthophosphate	mg/l	1.9	1.8	0.29
Ammonia Nitrogen	mg/l	20	1.12	1.68
Total Nitrogen	mg/l	25.2	6.3	5.6
Organic Nitrogen	mg/l	5.2	5.2	309
Total Suspended Solids	mg/l	38	42	66
Dissolved Oxygen	mg/l	6.7	13.3	8.0
pH	pH units	7.5	8.2	7.7
Electrical Conductivity	ms/cm	0.44	0.30	0.28

<sup>1</sup> Samples collected on 1/24/02

#### Sanitary Sewer Collection System

- The Camanche Reservoir South Shore wastewater collection system utilizes both gravity and force mains to direct wastewater to the treatment and storage/disposal ponds. The gravity system includes approximately 22,250 feet of 3 to 6 inch diameter sewer main and 8,310 feet of 3 to 4 inch lateral pipe. There is an estimated 4,650 feet of 2 to 4 inch force main piping.
- There are seven lift stations within the wastewater collection system. All are submersible, duplex or triplex pumping facilities. All of the lift stations are equipped with a System Control and Data Acquisition (SCADA) system which is

connected to the Pardee Reservoir Area Control Center (ACC). The lift station SCADA system provides EBMUD with information on pump failures and alarm conditions. None of the lift stations are furnished with permanent auxiliary power systems, although several of the lift stations have portable auxiliary power connections.

8. The collection system contains only 12 manholes and 10 cleanouts, which limits access for inspection and clean out of pipes. A significant portion of the collection system from the mobile home park was constructed under mobile home units without adequate access. Access is often limited to the individual cleanouts from the mobile home units.
9. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the WWTP. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities.
10. At this site, sanitary sewer overflows consist of domestic sewage. The chief causes of sanitary sewer overflows include grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and contractor caused blockages.
11. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause temporary exceedences of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.
12. The RWD shows that the Discharger responded and made repairs to the collection system 29 times during the calendar year 2001 due to plugged sewer lines. Of the 29 incidences, six resulted in sanitary sewer overflows which were reported to Regional Board staff. One of the six spills entered surface waters, while the remainder were contained on land. A majority of the plugged sewer lines occurred in the portion of the collection system located near the mobile home park. This order requires the Discharger to conduct a Sewer Condition Assessment and prepare a Retrofit Workplan that specifies a systematic program to complete a detailed assessment of the condition of the entire sewage conveyance system.
13. The Discharger is expected to take all necessary steps to adequately maintain, operate, and prevent discharges from its sanitary sewer collection system. In response to a 8 August 2001 Notice of Violation, the Discharger submitted a Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan. This Order requires that the Discharger implement the Plan.

#### Improvements to the Wastewater Disposal System

14. The Discharger has installed gravity main and force main flow meters on all three lines that discharge wastewater into Pond 1. However, the flow meters are not yet operating due to a lack of power supply. The Discharger has completed the maintenance work on the inboard levees of all three ponds to repair erosion. Future improvements include supplying power to the flow meters, and installation of a Remote Telemetry Unit that relays flow data to the Pardee ACC.

#### Site Specific Conditions

15. The average annual precipitation for this area is approximately 17.46 inches, which is based on rainfall data from the Department of Water Resources station B00 1325 located at Camanche Reservoir North Shore.
23. Six groundwater monitoring wells, as shown in Attachment B, were drilled and sampled as part of site closure activities for the landfill adjacent to the wastewater ponds. Three wells were drilled within the former landfill area, one within the former process pond area, one upgradient, and one downgradient of the landfill area. The wells were abandoned in 1997 after the WDRs for the landfill were rescinded. Groundwater elevation data collected from monitoring wells indicate that the recreational and wastewater ponds are a source of infiltration to groundwater and influence the shallow groundwater flow direction. Groundwater flows away from the wastewater ponds and

Catfish Annex Pond toward the closed landfill. Groundwater beneath the landfill flows east and south toward the Seasonal and Trout Ponds. Water level measurements taken from the monitoring wells in 1996 indicate that the depth to groundwater ranged from approximately 2.9 to 37.3 feet below ground surface. Results of water quality data collected for May and August 1996 are summarized below:

Constituent	Results (mg/l)					
	MW-1	MW-2	MW-3	MW-4	UGW	DGW
Nitrate (NO3-N)	0.13-0.6	<0.1-0.7	0.7-0.9	<0.1-0.2	<0.1-13.7	<0.2-0.2
Total Kjeldahl Nitrogen	1-2.6	1-7.2	<1-1.6	2-3.2	<1	<1
COD	28-94	28-45	15-34	100-180	17-27	11-19
Total Organic Carbon	19.6-36	10.9-14	8.8-9.8	43-56.1	2.6-6.1	3.6-4.6
Total Dissolved Solids	219-222	258-328	297-372	3460-4690	350-386	199-236

This data is inconclusive to determine whether the wastewater ponds are impacting groundwater.

24. The facility lies within the Lower Mokelumne Hydrologic Unit Area No. 531.20, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

#### Groundwater Degradation

25. State Water Resources Control Board (State Board) Resolution No. 68-16 (hereafter Resolution 68-16 or the "Antidegradation Policy") requires the Regional Board in regulating the discharge of waste to maintain high quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives).
26. The Regional Board finds that some degradation of groundwater beneath the wastewater treatment and storage/disposal ponds is consistent with Resolution 68-16 provided that:
  - a. The degradation is confined to a specified area;
  - b. The discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures;
  - c. The degradation is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order; and
  - d. The degradation does not result in water quality less than that prescribed in the Basin Plan.
27. Some degradation of groundwater by some of the typical waste constituents released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of California. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less. Degradation of groundwater by constituents (e.g., toxic chemicals) other than those specified in the groundwater limitations in this Order, and by constituents that can be effectively removed by conventional treatment (e.g., total coliform bacteria) is prohibited. When allowed, the degree of degradation permitted depends upon many factors (i.e., background water quality, the waste constituent, the beneficial uses and most stringent water quality objective, source control measures, and waste constituent treatability).
28. Economic prosperity of local communities and associated industry is of maximum benefit to the people of California, and therefore sufficient reason exists to accommodate growth and groundwater degradation around the wastewater treatment and storage/disposal ponds, provided that the terms of the Basin Plan are met.

### Treatment and Control Practices

29. This WWTP provides treatment and control of the discharge that incorporates:
  - a. Technology for secondary treatment of municipal wastewater;
  - b. A Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan; and
  - c. Staffing to assure proper operation and maintenance.
  
30. The WWTP treats wastewater to secondary standards. The wastewater characterization shows that the wastewater quality has a reasonable potential to impact the underlying groundwater and surrounding surface water bodies since the wastewater ponds are unlined and disposal of wastewater is done via evaporation and percolation. The water balance in the RWD shows that wastewater Pond 3 percolates wastewater at a rate of approximately 10.6 inches per month. The potential impacts on groundwater and the appropriate level of degradation that complies with Resolution 68-16 have not been fully evaluated. The Discharger's current effort does not constitute BPTC as intended in Resolution 68-16, and this Order establishes a schedule for tasks to evaluate BPTC for each conveyance, treatment, storage, and disposal component of the facility and to characterize groundwater for selected constituents. Completion of these tasks, and implementation of the approved strategies developed from that work, will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.
  
31. This Order establishes interim groundwater limitations for the WWTP that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. Based on the results of the scheduled tasks, the Regional Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16.

### Basin Plan, Beneficial Uses and Regulatory Considerations

32. The area surrounding Camanche Reservoir and the Camanche Reservoir South Shore Recreation Area is sparsely populated rural. The primary land use is agricultural grazing.
  
33. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
  
34. Surface water drainage from the WWTP is to Camanche Reservoir. The beneficial uses of Camanche Reservoir are domestic and municipal supply; irrigation and stock watering; contact and non-contact recreation, warm and cold freshwater habitat; warm water migration; warm and cold water spawning; and wildlife habitat.
  
35. The beneficial uses of underlying groundwaters are municipal and domestic water supply, agricultural supply, and industrial service and process supply.
  
36. The Basin Plan establishes numerical and narrative water quality objectives for surface and groundwater within the basin, and recognizes that water quality objectives are achieved primarily through the Regional Board's adoption of waste discharge requirements and enforcement orders. Where numerical water quality objectives are listed, these are limits necessary for the reasonable protection of beneficial uses of the water. Where compliance with narrative water quality objectives is required, the Regional Board will, on a case-by-case basis, adopt numerical limitations in orders, which will implement the narrative objectives to protect beneficial uses of the waters of the state.

37. The Basin Plan identifies numerical water quality objectives for waters designated as municipal supply. These are the maximum contaminant levels (MCLs) specified in the following provisions of Title 22, California Code of Regulations: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) of Section 64449. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that the Regional Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
38. The Basin Plan contains narrative water quality objectives for chemical constituents and toxicity. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective requires that groundwater shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The taste and odors objective requires that groundwater shall not contain tastes or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
39. Section 13241 of the Water Code requires the Regional Board to consider various factors, including economic considerations, when adopting water quality objectives into its Basin Plan. Water Code Section 13263 requires the Regional Board to address the factors in Section 13241 in adopting waste discharge requirements. The State Board, however, has held that a Regional Board need not specifically address the Section 13241 factors when implementing existing water quality objectives in waste discharge requirements because the factors were already considered in adopting water quality objectives. These waste discharge requirements implement adopted water quality objectives. Therefore, no additional analysis of Section 13241 factors is required.
40. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge*, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.
41. The Regional Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Regional Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.
42. The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. Because there is no storm water discharge from the industrial portion of the facility, the Discharger is not required to obtain coverage under General Permit No. CAS000001.
43. The action to update Waste Discharge Requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance Title 14, California Code of Regulations (CCR), Section 15301.
44. Section 13267(b) of the California Water Code provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."
45. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2002-0070" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the wastes subject to this Order.

46. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.
47. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.
48. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. (hereafter Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:
  - a. The waste consists primarily of domestic sewage and treated effluent;
  - b. The waste discharge requirements are consistent with water quality objectives; and
  - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.
49. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

**Public Notice**

50. The Regional Board considered all the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, in establishing the following conditions of discharge.
51. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
52. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that, pursuant to Sections 13263 and 13267 of the California Water Code, Order No. 86-155 is rescinded and the East Bay Municipal Utility District, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

*[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]*

**Discharge Prohibitions:**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated waste is prohibited.
3. Discharge of sewage from a sanitary sewer system at any point upstream of the WWTP is prohibited.
4. Discharge of waste classified as 'hazardous', as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or 'designated' as defined in Section 13173 of the California Water Code, is prohibited.
5. Surfacing of wastewater outside or downgradient of the ponds is prohibited.
6. The discharge of any wastewater other than that from domestic sources or domestic equivalent is prohibited.

**Discharge Specifications:**

1. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
2. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050
3. Objectionable odor originating at the facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.
4. As a means of discerning compliance with Discharge Specification No.3, the dissolved oxygen content in the upper zone (1 foot) in all ponds, wastewater shall not be less than 1.0 mg/l.
5. The wastewater treatment and storage/disposal ponds shall not have a pH of less than 6.5 or greater than 9.0.
6. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
7. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
8. The wastewater treatment, storage, and disposal system shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
9. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary infiltration and inflow during the winter months. 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.
10. The freeboard in all three wastewater ponds shall never be less than two feet as measured vertically from the water surface to the lowest point of overflow.
11. On or about **15 October** each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. 9 and No. 10.
12. The wastewater ponds shall be managed to prevent the breeding of mosquitoes. In particular,

- a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the waste surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, and/or herbicides.
  - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
13. The Discharger shall implement the 30 October 2001 *Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan* or any revisions thereto.

C. Effluent Limitations

1. Effluent in the storage/disposal pond (Pond 3) shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD <sup>1</sup>	mg/L	40	80

<sup>1</sup> BOD denotes 5-day biochemical oxygen demand at 20° C.

D. General Solids Disposal Specifications:

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse, and is actually reused, pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land recycling.

- 1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.
- 2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
- 3. Any storage of residual sludge, solid waste, and biosolids at the WWTF shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
- 4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTPs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Quality Control Board will satisfy this specification.
- 5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a Regional Water Quality Control Board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order No. 2000-10-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities*). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
- 6. Use and disposal of biosolids shall comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations (CFR), Part 503, which are subject to enforcement by the U.S. EPA, not the Regional Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, then the Regional Board may also initiate enforcement where appropriate.

**E. Groundwater Limitations:**

1. Release of waste constituents from any wastewater treatment or storage system component (i.e., ponds) associated with the WWTP shall not cause groundwater under and beyond that system component, as determined by an approved well monitoring network, to:
  - a. Contain any of the following constituents in concentration greater than as listed or greater than ambient background quality, whichever is greater:

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Boron	mg/L	0.6
→ Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 ml	Nondetect
Total Dissolved Solids <sup>1</sup>	mg/L	450
Total Nitrogen	mg/L	10
Nitrite (as N)	mg/L	1
Nitrate (as N)	mg/L	10
Ammonia (as N)	mg/L	0.5

<sup>1</sup>A cumulative impact limit that accounts for several dissolved constituents in addition to those listed here separately [e.g., alkalinity (carbonate and bicarbonate), calcium, hardness, phosphate, and potassium].

- b. Contain any constituent not identified in Groundwater Limitation E.1.a in concentrations greater than background quality (whether chemical, physical, biological, bacteriological, radiological, or some other property or characteristic).
  - c. Exhibit a pH of less than 6.5 or greater than 8.5 pH units.
  - d. Impart taste, odor, or color that creates nuisance or impairs any beneficial use.

**F. Surface Water Limitations**

The percolation of wastewater shall not cause the surface waters surrounding the wastewater treatment and storage/disposal ponds to contain waste constituents in concentrations statistically greater than background surface water quality.

**G. Provisions**

1. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described by Provision G.3.
  - a. By **1 July 2002**, the Discharger shall submit a report showing (a) how it has installed and calibrated accurate influent flow meters at the WWTP, (b) that the flow meters are operational, and (c) that repairs to the inboard levees of the wastewater ponds have been completed. The report at a minimum should describe what was done to repair the levee system and show the areas where the levees were repaired.
  - b. By **10 October 2002**, the Discharger shall submit a Contingency Plan describing the steps it will take if the wastewater in any pond encroaches within the two feet freeboard. The plan shall consider any and all steps necessary to prevent wastewater overflows including restricting water usage, hauling wastewater to another facility, and shutting down portions of the facility. This Contingency Plan shall be implemented whenever wastewater levels encroach within the two feet of freeboard in any pond.

- c. By **1 November 2002**, the Discharger shall submit a workplan for assessing groundwater quality at the WWTP, assessing background water quality in the freshwater ponds surrounding the wastewater ponds, assessing whether the wastewater ponds are impacting the underlying groundwater and/or surrounding surface water bodies, and assessing the percolation rates for the wastewater ponds. The workplan shall at a minimum describe the following:
- i. installation of a sufficient number of monitoring wells to allow an evaluation of the groundwater quality beneath, upgradient, and downgradient of the wastewater and surface water ponds.  
  
Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment C, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results*".
  - ii. the method(s) to be used to assess whether wastewater ponds are impacting the underlying groundwater and/or surrounding surface water bodies via wastewater percolation. The methodology must consider maximum design flow for the wastewater treatment system. In addition it must consider type of soils, seasonal variation to the soil moisture content, seasonal variation to the hydraulic loading for disposal system, and fluctuations of the groundwater. The assessment must be validated with actual data from the wastewater ponds, groundwater, and surface water. This portion of the workplan shall be implemented within 60 days of staff approval.
  - iii. the method(s) to be used to determine whether seepage of wastewater through and under the wastewater pond levees is potentially entering the surrounding surface water bodies and whether wastewater resurfacing in surrounding water bodies is occurring. This section shall propose and justify (a) surface water sampling locations and (b) chemical analyses. At a minimum, the workplan shall describe monthly monitoring events. Surface water monitoring shall be implemented upon staff approval of the workplan, and reporting shall be as described in the Monitoring and Reporting Program.
  - iv. the method(s) to be used to physically determine percolation rates at the wastewater ponds. This portion of the workplan shall be implemented within 60 days of staff approval.
- d. By **1 December 2002**, the Discharger shall submit a Sewer Condition Assessment and Retrofit Workplan that specifies a systematic program to complete detailed assessment of the condition of the entire sewage conveyance system.

At a minimum, the following elements shall be considered and prioritized for assessment: pipe segments with potential capacity problems; damaged pipe segments which may collapse or have deteriorated; conditions that may cause overflows; broken or missing pipe; separated pipe joints; storm drain cross connections; areas of severe inflow and infiltration; and known or suspected areas of frequent blockage. Assessment methods may include, but shall not be limited to, visual inspections, electrical/mechanical systems testing, television surveys, smoke or dye testing, and analytical testing for coliform organisms in suspect storm systems. The condition assessment must identify problem areas within the collection system and prioritize them for detailed inspection. The workplan shall present a detailed scope of work for each task of the condition assessment and the rationale for the proposed approach. However, for all sewer line segments that have a diameter of at least six inches and are within 50 feet of a surface water drainage course (as measured from the line which defines the limit of a 10-year frequency flood), line segments that are known to have overflowed to surface waters within the last five years, and areas for which sewer overflows may readily discharge to a surface water course, the condition assessment must include a visual inspection (e.g. television survey) of the entire sewer line segment. Sewer line repair and improvements shall be prioritized based on the potential impacts to human health, surface water and groundwater quality. The schedule shall show planned commencement and completion dates for each task and subtask. The schedule to complete the evaluation shall be as short as practicable, and shall no exceed one year.

- e. By **1 April 2003**, the Discharger shall submit a groundwater well installation report that is consistent with, and includes the items listed in, the second section of Attachment C.
  - f. By **1 September 2003**, the Discharger shall submit a revised water balance that incorporates flow data collected from the influent flow meters that were installed in early 2002, and incorporates percolation rates for the wastewater ponds that were determined based on the assessment that was required in Provision G.1.c.
  - g. By **1 December 2003**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least four consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with: 1) the calculated background concentration, and 2) the interim numeric limitations set forth in Groundwater Limitation E.1.a. Where background concentrations are statistically greater than the interim limitations specified in Groundwater Limitation E.1.a, the report shall recommend final groundwater limitations for waste constituents listed therein. Subsequent use of a concentration as a final groundwater limitation will be subject to the discretion of the Executive Officer.
  - h. By **1 July 2004**, the Discharger shall submit a *BPTC Evaluation Workplan* that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent listed in the Groundwater Limitation E.1.a of this Order. The workplan shall contain a preliminary evaluation of each component of the WWTP and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year.
  - i. By **1 September 2005**, the Discharger shall submit a *BPTC Evaluation Report and Implementation Workplan*. The report shall include an assessment of whether the wastewater ponds are impacting the underlying groundwater and/or surrounding surface water bodies (as determined by the workplan required by Provision G.1.c), a comprehensive evaluation of the BPTC measures studied, a discussion of BPTC measures proposed for implementation (i.e., recommendations for WWTP modifications), estimated concentration or mass loading reductions for each BPTC measure, specific methods the Discharger proposes to monitor and assure continuous optimal performance of BPTC measures, the source of funding, and proposed schedule for modifications. The schedule for full implementation shall be as short as practicable, and in no case shall it exceed four years past the Executive Officer's approval of the workplan unless specifically approved by the Regional Board. The component evaluation, recommended improvements, and implementation schedule are subject to the Executive Officer's approval.
  - j. By **1 September 2009**, the Discharger shall submit a technical report that proposes specific numeric groundwater limitations that reflect full implementation of BPTC measures, and describe how these were determined considering actual data from compliance monitoring wells, impact reductions through full implementation of BPTC, reasonable growth, etc. The Discharger should submit results of a validated groundwater model to support its proposal. In addition, the technical report shall describe the overall status of compliance with implementation of BPTC measures and compliance with all groundwater limitations.
  - k. **At least 180 days prior** to any biosolids removal and disposal, the Discharger shall submit a *Biosolids Cleanout Plan*. The plan shall include a detailed program and schedule for periodic pond cleanout and disposal of biosolids removed during pond cleanout, including at least the items listed in Attachment D of this Order.
2. Upon completion of tasks set forth in Provision G.1, the Regional Board shall consider the evidence provided and make a determination regarding whether the Discharger has justified BPTC and the appropriate final numeric groundwater limitations that comply with Resolution 68-16.

3. 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 sections 415 and 3065 of Title 16, CCR, 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.
4. The Discharger shall comply with the Monitoring and Reporting Program No. \_\_\_\_\_, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
5. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
6. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with discharge limits specified in this order.
7. As described in the Standard Provisions, the Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
8. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the Discharger shall take any necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:
  - a. Interception and rerouting of sewage flows around the sewage line failure;
  - b. Vacuum truck recovery of sanitary sewer overflows and wash down water;
  - c. Use of portable aerators where complete recovery of the sanitary sewer overflows are not practicable and where severe oxygen depletion is expected in surface waters; and
  - d. Cleanup of sewage-related debris at the overflow site.
9. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
10. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater 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.
11. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.
12. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

13. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
14. A copy of this Order shall be kept at the operations facility for the wastewater treatment facility (i.e. Pardee Center). Key operating personnel shall be familiar with its contents.
15. The Regional Board will review this Order periodically and may revise requirements when necessary.

I, GARY M. CARLTON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 26 April 2002.

Original Signed

GARY M. CARLTON, Executive Officer

Attachments

**JSK: 31 January 2002**

**Section 4-- Camanche Reservoir South Shore Recreation Area WWTF  
Copy of NPDES Permit and Attachments**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0070

FOR  
EAST BAY MUNICIPAL UTILITY DISTRICT  
CAMANCHE RESERVOIR SOUTH SHORE RECREATION AREA  
WASTEWATER TREATMENT PLANT  
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the wastewater treatment and storage/disposal ponds at the East Bay Municipal Utility District Camanche Reservoir South Shore Recreation Area WWTF. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

**INFLUENT MONITORING**

Influent monitoring shall be performed at each location where influent is discharged into Pond 1. Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent. Influent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total Flow <sup>1</sup>	gpd	Meter	Continuously	Monthly
20°C BOD <sup>2</sup>	mg/l	Grab	Quarterly	Quarterly

<sup>1</sup> Beginning 1 June 2002

<sup>2</sup> 5-day Biochemical Oxygen Demand

**POND MONITORING**

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in each treatment and storage/disposal pond. Freeboard will be measured vertically from the surface of the pond water to the lowest elevation of the surrounding levee and shall be measured to the nearest 0.25 feet. Monitoring of each pond shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen <sup>1</sup>	mg/l	Grab	Weekly	Monthly
pH	Standard units	Grab	Weekly	Monthly
Freeboard	0.25 feet	Measurement	Weekly	Monthly
Berm Seepage <sup>2</sup>	NA	Observation	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0070

FOR  
EAST BAY MUNICIPAL UTILITY DISTRICT  
CAMANCHE RESERVOIR SOUTH SHORE RECREATION AREA  
WASTEWATER TREATMENT PLANT  
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the wastewater treatment and storage/disposal ponds at the East Bay Municipal Utility District Camanche Reservoir South Shore Recreation Area WWTP. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

**INFLUENT MONITORING**

Influent monitoring shall be performed at each location where influent is discharged into Pond 1. Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent. Influent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total Flow <sup>1</sup>	gpd	Meter	Continuously	Monthly
20°C BOD <sup>2</sup>	mg/l	Grab	Quarterly	Quarterly

<sup>1</sup> Beginning 1 June 2002

<sup>2</sup> 5-day Biochemical Oxygen Demand

**POND MONITORING**

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in each treatment and storage/disposal pond. Freeboard will be measured vertically from the surface of the pond water to the lowest elevation of the surrounding levee

and shall be measured to the nearest 0.25 feet. Monitoring of each pond shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen <sup>1</sup>	mg/l	Grab	Weekly	Monthly
pH	Standard units	Grab	Weekly	Monthly
Freeboard	0.25 feet	Measurement	Weekly	Monthly
Berm Seepage <sup>2</sup>	NA	Observation	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

<sup>1</sup>Samples shall be collected at a depth of one foot from each pond, opposite the inlet. Samples shall be collected between 0700 and 0900 hours. If the Discharger completes a specialized sampling program that shows that DO is maintained above 1 mg/l throughout the day, then the Executive Officer may revise the time requirement.

<sup>2</sup>Pond containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids.

### EFFLUENT MONITORING

Effluent samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in pond 3. Effluent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
BOD <sup>1</sup>	mg/l	Grab	Monthly	Monthly
Total Coliform Organisms	MPN <sup>2</sup> /100 ml	Grab	Monthly	Monthly
Settleable Solids	ml/l	Grab	Monthly	Monthly
Total Dissolved Solids	mg/l	Grab	Monthly	Monthly
Nitrate as Nitrogen	mg/l	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/l	Grab	Monthly	Monthly
Formaldehyde	mg/l	Grab	Monthly	Monthly
Zinc	mg/l	Grab	Monthly	Monthly
Phenol	mg/l	Grab	Monthly	Monthly
Standard Minerals <sup>3</sup>	mg/l	Grab	Annually	Annually

<sup>1</sup> 5-day Biochemical Oxygen Demand

<sup>2</sup> Using a minimum of 15 tubes or three dilutions

<sup>3</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Sodium, Potassium, Chloride, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### SURFACE WATER MONITORING

Upon approval of the workplan required by Provision G.1.c, the Discharger shall begin monthly surface water monitoring of the freshwater ponds surrounding the wastewater ponds. Monitoring shall be conducted per the approved workplan, and the results submitted on a quarterly basis.

### GROUNDWATER MONITORING

The following shall constitute the groundwater monitoring program, which will begin the Second Quarter of 2003.

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Groundwater Elevation <sup>1</sup>	+0.01 feet	Measured	Quarterly	Quarterly
Depth to groundwater	+0.01 feet	Measured	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
pH	pH units	Grab	Quarterly	Quarterly
Boron	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Iron	mg/L	Grab	Quarterly	Quarterly
Manganese	mg/L	Grab	Quarterly	Quarterly
Sodium	mg/L	Grab	Quarterly	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/l	Grab	Quarterly	Quarterly
Zinc	mg/L	Grab	Quarterly	Quarterly
Total Phenols	mg/L	Grab	Quarterly	Quarterly
Formaldehyde	mg/L	Grab	Quarterly	Quarterly
Standard Minerals <sup>2</sup>	mg/l	Grab	Annually	Annually

*Ponds  
Fish*

<sup>1</sup> Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

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### SLUDGE MONITORING

A composite sample of sludge shall be collected when removed from the treatment and storage/disposal ponds in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the following metals:

Cadmium	Copper	Nickel
Chromium	Lead	Zinc

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

### WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Sampling Frequency</u>
Electrical Conductivity <sup>1</sup>	µmhos/cm	Annually
pH	pH units	Annually
Standard Minerals <sup>2</sup>	mg/l	Annually

<sup>1</sup> If the source water is from more than one well, the EC shall be reported as a weighted average and include copies of supporting calculations.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Sodium, Potassium, Chloride, Nitrate, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported to the Regional Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

### A. Monthly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1<sup>st</sup> day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, pond, and effluent monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.
5. A discussion on whether the wastewater contingency plan has been implemented.

### B. Quarterly Monitoring Reports

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1<sup>st</sup> day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1<sup>st</sup>) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;
2. Results of surface water monitoring;
3. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of the casing volume; and total volume of water purged;
4. Calculation of groundwater elevations, an assessment of the groundwater flow direction and gradient on the date of measurement, comparison to previous flow direction and gradient data, and discussion of seasonal trends, if any;
5. A narrative discussion of the analytical results for all media and locations monitored, including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
6. Summary data tables of historical and current groundwater table elevations and analytical results;

7. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
8. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
9. Copies of laboratory analytical report(s) for groundwater monitoring.

**C. Annual Report**

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly sampling schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last sampling event of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. An evaluation of the groundwater quality beneath the wastewater treatment facility;
4. An evaluation of the surface water quality in the freshwater ponds surrounding the wastewater ponds.
5. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
7. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.
8. Summary of information on the disposal of sludge and/or solid waste;
9. The results from annual monitoring of the groundwater wells and water supply;
10. The results from any sludge monitoring required by the disposal facility; and
11. A forecast of influent flows, as described in Standard Provision No. E4.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or

planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

  
GARY M. CARLTON, Executive Officer

26 April 2002

(Date)

JSK: 4/26/02

