

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0222

WASTE DISCHARGE REQUIREMENTS  
FOR  
CALAVERAS COUNTY WATER DISTRICT AND  
LA CONTENTA INVESTORS  
LA CONTENTA WASTEWATER TREATMENT AND RECLAMATION FACILITY  
CALAVERAS COUNTY

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

1. Calaveras County Water District and La Contenta Investors submitted a Report of Waste Discharge (RWD), dated 15 July 2002, for obtaining revised Waste Discharge Requirements (WDRs) for the La Contenta Wastewater Treatment and Reclamation facility (WWTF). Supplemental information was received on 30 September 2002.
2. The wastewater treatment plant, effluent storage reservoirs, and reclamation site are approximately five miles southeast of the community of Valley Springs, in Section 24, T4N, R10E, MDB&M and Section 25, T4N, R10E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference.
3. The Calaveras County Water District owns and operates the domestic wastewater treatment facility that includes collection, treatment, and storage facilities. Wastewater is recycled via irrigation on the La Contenta Golf Course. The golf course is owned and operated by La Contenta Investors. The facility layout is shown on Attachment B, which is attached hereto and made part of this Order by reference. A list of the parcels and their use is presented below:

<u>Assessor Parcel Number</u>	<u>Existing Land Use</u>
46-001-141	Treatment Plant and Upper Storage Reservoir
73-042-31	Lower Storage Reservoir
73-042-89	Recycling area (golf course)
73-042-90	Recycling area (golf course)
73-042-91	Recycling area (golf course)

4. Each entity shall hereafter be referred to individually (“Calaveras County Water District [CCWD]”) or “La Contenta Investors”) or jointly as “Discharger”. CCWD and La Contenta Investors shall be responsible for compliance with these WDRs as it applies to each entity’s own parcel of land as noted in Finding No. 3, and as described in Findings No. 5 and 6.
5. CCWD shall be responsible for the operation and maintenance of the collection system, wastewater treatment plant, and storage reservoirs.

6. La Contenta Investors shall be responsible for the operation and maintenance of the golf course irrigation system and disposal of wastewater to the golf course.
7. For the purposes of this Order, “WWTF” shall mean the sanitary collection and transport system, and the wastewater treatment, storage, and reclamation areas.
8. WDRs Order No. 95-177, adopted by the Regional Board on 23 June 1995, prescribes requirements for the collection treatment, and storage of wastewater by CCWD, and the subsequent reclamation on the La Contenta Golf Course. This Order is neither adequate nor consistent with the current plans and policies of the Regional Board.

### **Wastewater Treatment and Storage**

9. The La Contenta WWTF provides wastewater services to the La Contenta subdivision and golf course, the surrounding area contained within CCWD Assessment District 604 (AD 604), and adjacent residential and commercial development. The La Contenta subdivision currently has approximately 540 equivalent single-family dwellings (ESFUs). The Discharger anticipates that ultimate build out of the La Contenta subdivision and AD 604 will result in approximately 2,290 ESFUs. Development of known proposed residential subdivisions outside the AD 604 boundary will increase the total number of ESFUs to approximately 2,810.
10. The wastewater treatment process consists of a mechanically cleaned bar screen, an activated sludge basin, a secondary clarifier, coagulant feed, sand filters, and chlorine disinfection. Treatment plant effluent is stored during the wet season in two storage reservoirs, and recycled as irrigation water on the La Contenta Golf Course during the spring, summer, and early fall.
11. Waste activated sludge is pumped to a 125,000 gallon concrete lined sludge lagoon for stabilization and storage prior to gravity dewatering on concrete lined drying beds. Dried sludge solids are periodically removed and hauled to a sanitary landfill for disposal. Supernatant liquid from the drying process is pumped back to the aeration basin via an effluent return pump station.
12. As described in the RWD and monthly monitoring reports for the years 2001 and 2002, influent and effluent wastewater is characterized as follows:

Constituent	Influent Concentration (monthly average)	Effluent Concentration (monthly average)
BOD <sub>5</sub>	172 to 238 mg/L	2.3 to 9.0 mg/L
Suspended Solids	128 to 221 mg/L	0.5 to 1.8 mg/L
Settleable Solids	N/A	< 0.1 mg/l
Total Dissolved Solids	N/A	315 to 500 mg/L
Total Coliform Organisms	N/A	< 2.0 MPN/100ml
pH	N/A	6.8 to 7.5

13. The treatment plant is designed to treat up to 400,000 gpd of wastewater. However, the RWD states that the chlorine contact chamber is only designed to handle flows of approximately 150,000 gpd. In addition, the RWD shows that the storage and disposal capacity is limited 260,000 gpd, based on a 100 year annual precipitation event. Therefore, this Order initially limits the CCWD to a monthly average dry weather flow of 150,000 gpd. In anticipation of higher flows in the future, the CCWD plans to increase the capacity of the chlorine contact basin to 200,000 gpd. Upon verification of this construction, the CCWD will be allowed to increase its monthly average dry weather flow to 200,000 gpd.
14. The wastewater treatment facility currently treats a maximum monthly average dry weather flow of approximately 110,000 gpd. This flow estimate was based on operating data compiled by the CCWD for the dry seasons of 2000 and 2001. The RWD states that peak wet weather flows are known to be about 1.1 million gallons per day (mgd). The CCWD estimates that monthly average dry weather flows, based on future maximum build out, will be approximately 630,000 gpd. Because the treatment plant is only designed treat up to 400,000 gpd, and the storage/disposal capacity and chlorine contact are limited to flows of 260,000 and 150,000 gpd, respectively, the WWTF will have to be upgraded and expanded to meet future maximum build out conditions.
15. Two reservoirs (i.e., Upper and Lower) provide for effluent storage during the wet weather months. The Upper Reservoir has a storage capacity of approximately 49 acre-feet and the Lower Reservoir has a storage capacity of 23 acre-feet. The CCWD is currently constructing improvements to increase the capacity of the Lower Reservoir to approximately 172 acre-feet. This construction is in response to Cleanup and Abatement Order No. R5-2002-0712, which was issued by the Executive Officer due to a lack of storage capacity. Once construction is complete, the combined storage capacity of both storage reservoirs, allowing for two feet of freeboard, will be approximately 221 acre-feet.
16. The water balance presented in the RWD assumes that the percolation rates through the bottom and sides the storage reservoirs is in the range of  $1.3$  to  $2.9 \times 10^{-6}$  cm/sec. To verify this assumption, the CCWD will conduct permeability testing of the bottom and sides of the effluent storage reservoirs to determine actual percolation rates. Final percolation rates for the expanded Lower Reservoir will be calculated after construction is completed and the reservoir has been used for a least one year. If the percolation rates for the Upper Reservoir are determined to be greater than  $1.0 \times 10^{-6}$ , the CCWD will construct a new liner system.

### **Recycled Water Discharge**

17. In 1991, CCWD and La Contenta Investors entered into an agreement in which CCWD will provide treated effluent to the golf course for irrigation purposes. The agreement indicates that CCWD is responsible for treatment, storage, and conveyance of treated effluent to the golf course irrigation pump station, while La Contenta Investors is responsible for operation and maintenance of the irrigation system and minimization of effluent runoff from the reclamation areas.
18. Irrigation of the La Contenta Golf Course primarily occurs between the months of April through October. The golf course consists of approximately 127 acres, 57 of which are irrigated, as shown

on Attachment C, which is attached hereto and made part of this Order by reference. Irrigated vegetation at the golf course consists primarily of turf grass, trees, and bushes. To minimize public exposure to the recycled water, irrigation is conducted at night when the golf course is closed.

19. The La Contenta wastewater treatment plant does not generate enough effluent to meet all the irrigation needs of the golf course. Therefore, treated effluent is supplemented with raw water from New Hogan Reservoir. Raw water is also used to maintain the golf course water hazards, and is pumped to the golf course and then transported via a gravity ditch to Skinny Dip Lake and Lakes # 7, 8, and 18. The golf course irrigation pump station draws the supplemental water directly from Lake # 7.
20. Recycled water is delivered via an eight-inch pipeline from the Lower Storage Reservoir directly to the irrigation pump station's wet well next to Lake # 7. Effluent is delivered to the wet well only when the golf course irrigation demand exceeds approximately 800 gallons per minute. Typically, supplemental raw water is used for irrigation during the first two hours and last two hours of each irrigation cycle. There are no mechanical devices (e.g., check valves) that will prevent effluent in the irrigation pump station wet well from entering Lake # 7 if multiple pump failures were to occur. However, effluent is only introduced into the wet well when the irrigation pumps are operation and it is highly unlikely that effluent would backflow into Lake # 7. Therefore, a backflow prevention device is not required on the wet well.
21. An irrigation computer program receiving daily data from an on-site weather station determines the nightly irrigation needs of the golf course. Based on the total demand, the amount of raw water and effluent used to irrigate the golf course is adjusted daily.
22. The golf course irrigation system is designed such that there will be no or minimal irrigation runoff into the water hazards, ponds, surface drainage courses, and creeks throughout the golf course. Features to prevent and minimize runoff include: small sprinkler irrigation zones, buffer zones between irrigated areas and surface waterbodies; sprinkler zones that can be adjusted individually to correspond to local soil conditions; an on-site weather station used to determine daily evapotranspiration rates; and an irrigation computer program used to adjust daily irrigation rates. Because recycled water is not stored in water hazards or ponds within the golf course, and irrigation runoff is minimized, the water hazards and ponds are kept filled with raw water from New Hogan Reservoir.
23. Recycled water will be applied at agronomic rates.
24. Residential dwellings are built along the fairways of the golf course. La Contenta Investors must comply with Section 60310 of Title 22, California Code of Regulations (CCR), which prohibits spray, mist, or runoff of recycled water from entering dwellings, outdoor eating areas, or food handling facilities. The RWD states that the irrigation system is designed, operated, and maintained to prevent irrigation spray, mist, and runoff from occurring.
25. Section 60310 of Title 22, CCR, requires the recycled water distribution system (i.e., sprinkler lines, quick couplers, valve boxes, etc.) to be clearly marked so as to identify those apparatus as

containing recycled water. The RWD states that underground sprinkler lines are wrapped with purple tape that reads "Caution- Recycled Water- Do Not Drink." All sprinkler heads contain purple plates, and valve box covers have "Recycled Water" inscribed on the face covers.

### **Sanitary Sewer Collection System**

26. CCWD's sanitary sewer system collects wastewater using sewers, pipes, and a sewage pump, and directs this raw sewage to the treatment plant headworks. Two gravity sewer mains, an 8-inch and an 18-inch, convey collection system flows to the main sewage pump station. The main pump station is equipped with local and remote alarms to indicate low and high wet well water levels, backup generator operation status, and pump failures. Wastewater is pumped from the main pump station through an 11,000-foot long, 12-inch force main to the treatment plant headworks.
27. 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 wastewater treatment plant. 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.
28. At this facility, 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.
29. 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.
30. CCWD believes that I&I is a significant source of increased flows into the WWTF during wet weather conditions, and therefore C&A Order No. R5-2002-0712 requires the CCWD to submit a *Sewer Condition Assessment and Retrofit Workplan* that specifies a systematic program and timeline to complete a detailed assessment and condition of the entire sewage conveyance system. On 15 July 2002, the CCWD submitted the required workplan, stating that collection system assessment should be complete by late 2004 and that repairs will begin once the assessment is complete. In addition to making collection system improvements, CCWD is expected to take all necessary steps to adequately maintain, operate, and prevent discharges from its sanitary sewer collection system.

### **Planned Upgrades and Improvements to the WWTF**

31. In order to meet the freeboard and winter storage requirements of WDRs Order No. 95-177, and to comply with C&A Order No. R5-2002-0712, CCWD is increasing the storage capacity of the

Lower Storage Reservoir to approximately 172 acre feet. The water balance presented in the RWD indicates that the combined storage capacity of both the Upper and Lower Reservoirs will provide sufficient storage capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration, based on a 100 year annual storm event.

32. Title 22 of the CCR requires facilities that produce recycled wastewater for unrestricted reuse (i.e., irrigation of golf courses) to either have full process component backup reliability features, or sufficient emergency storage for at least 20 days under peak month wastewater flow conditions.
33. CCWD has chosen to meet the 20-day emergency storage requirement. To do so, the Upper Reservoir will be converted to a dual-purpose basin, and used as a storage reservoir under the normal operating conditions. However, a portion will remain available to provide a minimum of 20 days of emergency storage under peak monthly flow conditions. If the Upper Reservoir is ever used for emergency storage, the whole volume of the reservoir will be retreated, and the basin cleaned prior to re-initiating the storage of tertiary effluent. CCWD plans to make several modifications to the WWTF in order to convert the Upper Reservoir to a dual purpose basin, including:
  - Upgrades of the effluent return pump station and yard piping to allow the wastewater from the Upper Reservoir to be pumped back to the headworks.
  - Automation of the two lines directing flow to the Lower and Upper Reservoirs, and
  - Electrical modifications to operate the automatic valves during power outages.
34. In anticipation of increased flows due to future growth, CCWD plans to increase the design capacity of the chlorine contact chamber from 150,000 gpd to 200,000 gpd. The RWD states that, at the historical annual increase in new connections of 3.4%, the facility will not reach a flow of 200,000 gpd until the year 2015.
35. To comply with the requirements of Title 22 of the CCR, CCWD will install continuous turbidity monitoring devices both upstream and downstream of the tertiary filters, and install a continuous chlorine residual monitoring device. This Order requires CCWD to install the required monitoring equipment by 15 July 2003.

#### **Site-Specific Conditions**

36. The average annual precipitation for this area is approximately 22 inches, based on rainfall data from the Camp Pardee Weather Station.
37. The WWTF lies within the Lower Calaveras Hydrologic Unit Area No. 533.30, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
38. Surrounding land uses are predominantly residential, commercial, and undeveloped properties.

39. The RWD states that the soils at the La Contenta Golf Course are typically sandy silts and clays with various amounts and sizes of rock fragments. Soil depth typically is about three inches to three feet. Weathered metamorphic bedrock typically underlies the silt and clay. The depth of the weathered bedrock zone varies from one foot to nine feet. Below the weathered bedrock zone is unweathered and highly resistant bedrock.
40. No information currently exists regarding the groundwater underlying the treatment, storage, and recycling areas. In order to determine compliance with the Groundwater Limitations section of this Order, the Discharger is required to install and sample groundwater monitoring wells or other similar devices.

### **Groundwater Degradation**

41. State Water Resources Control Regional 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 (i.e., background water quality) 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).
42. The Regional Board finds that some degradation of groundwater beneath the WWTF is consistent with Resolution 68-16 provided that:
  - a. The degradation is confined within a specified boundary;
  - 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 domestic 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.
43. 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).

44. 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 WWTF, provided that the terms of the Basin Plan are met.

### **Treatment and Control Practices**

45. This WWTF provides treatment and control of the discharge that incorporates:
- a. Technology for tertiary treatment;
  - b. Alarm and automatic flow diversion systems to prevent system bypass or overflow;
  - c. Recycling of wastewater using agronomic application rates;
  - d. Appropriate biosolids storage and disposal practices; and
  - e. Certified operators to assure proper operation and maintenance.
46. The design of the WWTF and the effluent recycling program incorporate several BPTC measures. In order to determine compliance with Resolution No. 68-16, this Order establishes a schedule to install and sample groundwater monitoring wells, as well as formally determine background groundwater concentrations for selected constituents. If groundwater has been degraded, then the Discharger will be required to evaluate and implement BPTC measures for each conveyance, treatment, storage, and disposal component of the system. Completion of these tasks will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.
47. This Order establishes interim groundwater limitations for the WWTF 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.

### **Water Recycling**

48. State Board Resolution No. 77-1, *Policy with Respect to Water Reclamation in California*, encourages recycling projects that replace or supplement the use of fresh water, and *The Water Recycling Law* (CWC sections 13500-13529.4) declares that utilization of recycled water is of primary interest to people of the State in meeting future water needs.
49. A 1988 Memorandum of Understanding between the California Department of Health Services (DHS) and the State Board on the use of recycled water establishes basic principles relative to the two agencies and the regional boards. The Memorandum allocates primary areas of responsibility and authority between the agencies and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to use of recycled water.



50. The DHS has established statewide water recycling criteria contained in Title 22, CCR, Section 60301 et. seq. DHS revised the water recycling criteria contained in Title 22 on 2 December 2000. CCWD will treat the wastewater to tertiary standards and disinfect the tertiary effluent per Title 22 requirements because of the potential for human contact with the recycled wastewater when it is used to irrigate the golf course.
51. The DHS requires that the American Water Works Association (AWWA) *Guidelines for Distribution of Non-Potable Water* and *Guidelines for the Onsite Retrofit of Facilities Using Disinfected Tertiary Recycled Water* be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, etc. Adequate separation of the recycled water lines, the domestic water lines, and the sewer lines shall be provided.
52. Section 60323(a) of Title 22 states that no person shall produce or supply recycled water for direct reuse from a proposed water reclamation plant unless a Title 22 Engineering Report is submitted for review, and approval by DHS and the Regional Board. Recycled wastewater used for irrigation of golf courses is considered a beneficial reuse. A Title 22 Engineering Report was submitted to DHS on 15 July 2002. DHS has not yet provided comments on the Title 22 Report. This Order requires compliance with Title 22 and the Dischargers are expected to address DHS's comments, and make any necessary facility modifications in a timely manner.

#### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

53. 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.
54. Surface water drainage from the WWTF is to Cosgrove Creek, a tributary of the Calaveras River. The beneficial uses of Calaveras River are municipal and domestic supply; agricultural supply for irrigation and stock watering; industrial process and service supply; contact and noncontact recreation; warm and cold freshwater habitat; warm and cold water migration; warm and cold water spawning; and wildlife habitat.
55. The beneficial uses of underlying groundwaters are municipal and domestic water supply, agricultural supply, and industrial service and process supply.
56. The Basin Plan encourages water recycling.
57. 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.

58. 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.
59. The Basin Plan contains narrative water quality objectives for chemical constituents, tastes and odors, 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 tastes and odors objective requires that groundwater shall not contain tastes or odors producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
60. 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.
61. Federal regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on 16 November 1990 (40 CFR Parts 122, 123, and 124). The regulations require specific categories of facilities which discharge stormwater associated with industrial activities to obtain NPDES permits. The design flow at this wastewater treatment plant is less than 1.0 mgd and therefore the Discharger is not required to apply for a stormwater NPDES permit.
62. 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.
63. 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.

64. The State Water Resources Control 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. The wastewater treatment plant facilities are designed to drain all runoff to the plant headworks. 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.
65. On 10 November 1988, the Calaveras County Water District adopted a Mitigated Negative Declaration (Resolution Order No. 88-155) for the La Contenta WWTF. The Mitigated Negative Declaration was prepared in accordance with the California Environmental Quality Act (CEQA; CCR, Title 14, Section 15261 et. seq.), and State CEQA guidelines.
66. On date 18 June 2001, in accordance with CEQA, Calaveras County Water District adopted a Mitigated Negative Declaration (Resolution No. 2001-31) for construction of additional recycled water storage facilities at CCWD's La Contenta wastewater treatment plant.
67. 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 waste 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 waters 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 report 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"
68. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2002-0222" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.
69. The California Department of Water Resources set 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.
70. 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.

71. 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 Section 20090(a) of Title 27, 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 domestic wastewater WWTF.
72. 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**

73. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
74. The State Department of Health Services has been consulted with, and their recommendations regarding the public health aspects of water recycling have been considered.
75. The Discharger and interested agencies and persons were notified of the Board's intent to prescribe waste discharge requirements for this discharge, and have been provided with an opportunity for a public hearing and an opportunity to submit written views and recommendations.
76. In a public meeting, all comments pertaining to the discharge were heard and considered.

**IT IS HEREBY ORDERED** that pursuant to Sections 13263 and 13267 of the California Water Code, Order No. 92-177 is rescinded and Calaveras County Water District, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, 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.

#### **A. 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 waste from the sanitary sewer system at any point upstream of the treatment plant is prohibited. Discharge of treated wastewater downstream of the treatment plant and storage reservoirs, other than at the approved land application areas (golf course), 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. The use of recycled wastewater for the purposes other than irrigation is prohibited.

**B. Discharge Specifications:**

1. The monthly average dry weather influent flow into the treatment facility shall not exceed 150,000 gpd. Upon completion of the chlorine contact chamber expansion, the Discharger shall submit an expansion report prepared by a California registered engineer, and upon approval of the report by the Executive Officer, the monthly average dry weather influent flow shall not exceed 200,000 gpd.
2. 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.
3. Public contact with wastewater at the treatment facility and effluent storage reservoirs shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
4. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.
5. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment plant site boundaries.
6. As a means of discerning compliance with Discharge Specification No. 5, the dissolved oxygen content in the upper zone (one foot) of all effluent storage reservoirs shall not be less than 1.0 mg/l.
7. The wastewater in the storage reservoirs shall not have a pH of less than 6.5 or greater than 8.5.
8. The CCWD shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
9. The CCWD shall treat the wastewater such that it complies with Title 22 CCR, Section 60301.230 ("Disinfected Tertiary Recycled Water").

10. The CCWD’s wastewater treatment plant and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
11. The WWTF shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with the historical rainfall patterns.
12. The freeboard in effluent storage reservoirs shall never be less than two feet as measured from the water surface to the lowest point of overflow.
13. On or about **15 October** each year, available reservoir storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. B.11 and B.12.
14. The reservoirs shall be managed to prevent the 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 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.

**C. Effluent Limitations:**

1. Treated effluent discharged from the treatment plant to the effluent storage reservoirs shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>
BOD <sup>1</sup>	mg/L	10	20
Settleable Solids	MI/L	0.1	0.2

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

2. Recycled water discharged to the effluent storage reservoirs for subsequent discharge to the La Contenta Golf Course irrigation system shall comply with the following limits for total coliform organisms.
  - a. The median concentration of total coliform bacteria shall not exceed an MPN of 2.2 per 100 milliliters (ml) utilizing the bacteriological results of the last seven days for which analyses have been completed.

- b. The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period.
  - c. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.
3. The turbidity of the filter effluent shall not exceed 2.0 NTU as a daily average; shall not exceed 5.0 NTU more than 5 percent of the time during a 24 hour period; and shall never exceed 10 NTU.
  4. Effluent discharged to the storage reservoirs shall not have a pH of less than 6.5 or greater than 8.5.

**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 wastewater treatment plant. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

1. Sludge and solid waste shall be removed from screens, sumps, ponds, reservoirs, and clarifiers as needed to ensure optimal plant operation.
2. Treatment and storage of sludge generated by the wastewater treatment plant shall be confined to the plant 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 plant 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. Water Recycling Specifications:**

1. Recycled wastewater used for irrigation shall meet the criteria contained in Title 22, CCR.

**F. Groundwater Limitations**

1. Release of waste constituents from the wastewater treatment plant and storage reservoirs 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	0.7
Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 mL	Non-detect
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 NH <sub>4</sub> )	mg/L	0.5
Bromoform	µg/l	4
Bromodichloromethane	µg/l	0.27
Chloroform	µg/l	1.1
Dibromochloromethane	µg/l	0.37

<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 F.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. Impare taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

**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.4.
  - a. By **15 July 2003**, CCWD shall submit a report certifying that the upgrades and modification described in Findings No. 33 and 35 have been completed. The report shall describe how the dual purpose reservoir is operated, and provide a detailed description of the type(s) of equipment installed as part of the modification/upgrade. The report shall also describe the installation of continuous turbidity monitoring devices both upstream and downstream of the tertiary treatment filters, as well as installation of the continuous chlorine residual monitoring device. This report shall be submitted to the Regional Board and DHS. If DHS review of the Title 22 Engineering Report shows that additional modifications are necessary, then this report shall include a proposed timeline for the additional modifications.
  - b. By **30 July 2003**, CCWD shall submit a report presenting the results of the permeability test conducted on the Upper Reservoir. If the results of the permeability tests indicate that percolation rates through the berms and bottom of the reservoirs are greater than  $1.0 \times 10^{-6}$ , then the CCWD shall provide a timetable in which it will reline the Upper Effluent Storage Reservoir.
  - c. By **1 October 2003**, CCWD and La Contenta Investors shall submit a workplan for characterization of groundwater quality. The workplan shall describe the installation of wells or similar devices to allow evaluation of the groundwater quality upgradient and downgradient of the effluent storage reservoirs and the reclamation areas (golf course). 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 D, *“Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.”*
  - d. By **15 December 2003**, CCWD shall submit a revised water balance that incorporates the data collected from permeability testing and evaluates whether the percolation rate assumptions used in the RWD are correct, and determines whether the WWTF has sufficient treatment, storage, and disposal capacity for a monthly average flow of 200,000 gpd, based on 100 year precipitation event.

- e. By **1 June 2004**, CCWD and La Contenta Investors shall submit a groundwater well installation report for monitoring wells or similar devices installed in compliance with Provision G.1.c that is consistent with, and includes the items listed in, the second section of Attachment D.
  - f. By **1 December 2004**, CCWD shall submit a report that presents results of the Sanitary Sewer Collection System Assessment. The report shall describe those portions of the collection system that were assessed, show the areas where potential I&I problem may be occurring, and provide a time schedule for making repairs to those portions with potential concerns.
  - g. By **1 November 2005**, CCWD and La Contenta Investors 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 F.1.a. Where background concentrations are statistically greater than the interim limitations specified in Groundwater Limitation F.1.a, the report shall recommend final groundwater limitations which comply with Resolution 68-16 for the waste constituents listed therein. Subsequent use of a concentration as a final groundwater limitation will be subject to the discretion of the Executive Officer.
2. **At least 180 days prior** to any biosolids removal and disposal, CCWD shall submit a *Biosolids Cleanout Plan*. The plan shall include a detailed program and schedule for periodic reservoir cleanout and fully describe how biosolids will be disposed of.
  3. Upon completion of tasks set forth in Provision No. G. 1, the 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.
  4. 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.

5. If groundwater monitoring results show that the discharge of waste to effluent storage reservoirs or land application areas is causing groundwater to contain waste constituents in concentrations statistically greater than background water quality, then within 120 days of the request of the Executive Officer, the Discharger shall submit a *BPTC Evaluation Workplan* that sets forth a scope and schedule for a systematic and comprehensive technical evaluation of each component of the system's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent listed in the Groundwater Limitations F.1.a of this Order. The workplan shall contain a preliminary evaluation of each component of the WWTP and wastewater recycling system 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.
6. The CCWD shall comply with the Monitoring and Reporting Program No. R5-2002-0222, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
7. The CCWD shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
8. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, CCWD 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 CCWD shall use the best practicable treatment and control, including proper operation and maintenance, to comply with this order.
10. The CCWD shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
11. The CCWD 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.”

12. The CCWD shall not allow pollutant-free wastewater to be discharged into the wastewater collection and treatment 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.
13. The CCWD 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.
14. 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.
15. The CCWD 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 recession of this Order.
16. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
17. The Board will review this Order periodically and will revise requirements when necessary.

**IT IS HEREBY ORDERED** that pursuant to Sections 13263 and 13267 of the California Water Code, Order No. 92-177 is rescinded and La Contenta Investors, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, 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.

**H. 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 recycled wastewater outside of the approved land application areas (golf course) is prohibited.
4. Application of wastewater to areas different than those described in Finding No. 18 is prohibited.
5. 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.
6. The use of recycled wastewater for the purposes other than irrigation is prohibited.

**I. Water Recycling Specifications:**

1. Recycled wastewater used for irrigation shall meet the criteria contained in Title 22, CCR.
2. 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.
3. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the land application areas.
4. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.
5. La Contenta Investors shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
6. Portions of the golf course which are within the 100-year flood plain shall not be irrigated with recycled effluent during periods of flooding or imminent flooding.
7. The WWTF shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with the historical rainfall patterns.
8. The freeboard in effluent storage reservoirs shall never be less than two feet as measured from the water surface to the lowest point of overflow.
9. On or about **15 October** each year, available reservoir storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. I. 7 and I. 8.
10. Public contact with recycled wastewater at the golf course shall be controlled through the use of fences and cautionary signs, and/or appropriate means. Perimeter warning signs

indicating that recycled water is in use shall be posted at adequate signage along the property boundary and at each access road entrance to the irrigation area, including cart paths. The size and contents of these signs shall be as described in Section 60310(a) of Title 22.

11. Recycled water controller, valves, and similiary appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles, locking mechanisms, or some other means to prevent public access or tampering. The contents of the signs shall conform to Section 60310 of Title 22. Quick couplers and sprinkler heads, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibs that the public could use shall be eliminated.
12. Any connection between the recycled water conveyance system and any potable water conveyance system, groundwater supply well, or surface water supply source for the purpose of supplementing recycled water shall be equipped with a DHS-approved backflow prevention device.
13. Direct or windblown spray of recycled water shall be confined to the designated land application area and shall be prevented from entering outdoor eating areas, dwellings, drinking water facilities, food handling facilities, and other locations where the public may be present. In addition, direct or windblown spray of recycled water shall not enter surface watercourses.
14. Application of wastewater to land shall not be performed within 24 hours before a forecasted storm, during precipitation, or within 24 hours after any precipitation event, nor when the ground is saturated.
15. Spray irrigation with recycled water is prohibited when wind velocities exceed 30 mph.
16. Areas irrigated with recycled water shall be managed to prevent breeding of mosquitoes. More specifically:
  - a. All applied irrigation water must infiltrate completely within 24 hours.
  - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.
  - c. Low-pressure and un-pressurized pipelines and ditches which are accessible to mosquitoes shall not be used to store reclaimed water.
17. Reclaimed irrigation water shall be managed, using BPTC methods, to minimize runoff and movement of aerosols from the designated golf course irrigation areas.
18. A 15 foot buffer zone shall be maintained between any watercourse and the wetted area produced during land application of effluent.
19. A 50 foot buffer zone shall be maintained between any spring, domestic well or irrigation well and the wetted area produced during land application of effluent.

20. Application rates of recycled water shall not exceed agronomic rates considering the crop, soil, climate, and irrigation management system. The nutrient loading of the reclamation areas, including nutritive value or organic and chemical fertilizers and of the reclaimed water shall not exceed the crop demand.

**J. Groundwater Limitations**

1. Release of waste constituents from the wastewater disposal components associated with the golf course 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	0.7
Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 mL	Non-detect
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 NH <sub>4</sub> )	mg/L	0.5
Bromoform	µg/l	4
Bromodichloromethane	µg/l	0.27
Chloroform	µg/l	1.1
Dibromochloromethane	µg/l	0.37

<sup>2</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 J.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. Impare taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

**K. 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 K.3.
  - a. If DHS's review of the Title 22 Engineering Report shows that additional modifications to the golf course are necessary, then by **15 July 2003**, La Contenta Investors shall submit a report describing the modifications to be made and the proposed timeline for each.
  - b. By **1 October 2003**, CCWD and La Contenta Investors shall submit a workplan for characterization of groundwater quality. The workplan shall describe the installation of wells or similar devices to allow evaluation of the groundwater quality upgradient and downgradient of the effluent storage reservoirs and reclamation areas (golf course). 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 D, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"
  - c. By **1 June 2004**, CCWD and La Contenta Investors shall submit a groundwater well installation report for monitoring wells or similar devices installed in compliance with Provision K.1.a that is consistent with, and includes the items listed in, the second section of Attachment D.
  - d. By **1 November 2005**, CCWD and La Contenta Investors 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 J.1.a. Where background concentrations are statistically greater than the interim limitations specified in Groundwater Limitation J.1.a, the report shall recommend final groundwater limitations which comply with Resolution 68-16 for the waste constituents listed therein. Subsequent use of a concentration as a final groundwater limitation will be subject to the discretion of the Executive Officer.
2. Upon completion of tasks set forth in Provision No. K. 1, the 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. If groundwater monitoring results show that the discharge of waste to the WWTF is causing groundwater to contain waste constituents in concentrations statistically greater than background water quality, then within 120 days of the request of the Executive Officer, the Discharger shall submit a *BPTC Evaluation Workplan* that sets forth a scope and schedule for a systematic and comprehensive technical evaluation of each component of the system's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent listed in the Groundwater Limitations J.1.a of this Order. The workplan shall contain a preliminary evaluation of each component of the wastewater recycling system 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.
5. La Contenta Investors shall comply with the Monitoring and Reporting Program No. R5-2002-0222, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
6. La Contenta Investors shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
7. La Contenta Investors shall use the best practicable treatment and control, including application of recycled wastewater at agronomic rates, and proper operation and maintenance of the irrigation system, to comply with this order.
8. La Contenta Investors shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
9. La Contenta Investors 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.

10. In the event of any change in control or ownership of land or waste discharge facilities described herein, La Contenta Investors 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.
11. La Contenta Investors 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 recession of this Order.
12. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
13. The Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, 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 6 December 2002.

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THOMAS R. PINKOS, Executive Officer

Attachments

JSK: 10 June 2003

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0222  
FOR

CALAVERAS COUNTY WATER DISTRICT AND  
LA CONTENTA INVESTORS  
LA CONTENTA WASTEWATER TREATMENT AND RECLAMATION FACILITY  
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the wastewater treatment plant, effluent storage reservoirs, reclamation areas, groundwater, water supply, and supplemental water supply. 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. Calaveras County Water District and La Contenta Investors are jointly responsible for implementing this MRP, and shall submit joint monitoring reports.

All samples shall 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 measure 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. The 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 the MRP.

**INFLUENT MONITORING**

Samples of influent wastewater shall be collected at approximately the same time as effluent samples and should be representative of the influent flow to the treatment plant. At a minimum, influent monitoring shall consist of the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	mgd	Continuous	Daily	Monthly
BOD <sub>5</sub> at 20° C	mg/L	Grab	Monthly	Monthly
Total Suspended Solids	mg/L	Grab	Monthly	Monthly

### EFFLUENT MONITORING

Effluent samples shall be collected before discharge to either effluent storage reservoir and shall be representative of the volume and nature of the discharge. 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>
Total Coliform Organisms <sup>1</sup>	MPN/100 ml <sup>2</sup>	Grab	Daily	Monthly
Turbidity <sup>3</sup>	NTU	Continuous	Daily	Monthly
BOD <sub>5</sub>	mg/L	Grab	Weekly	Monthly
Settleable Solids	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sodium	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
pH	Standard	Grab	Monthly	Monthly
Standard Minerals <sup>4</sup>	mg/L	Grab	Annually	Annually

<sup>1</sup> Using a minimum of 10 tubes or two dilutions.

<sup>2</sup> Most probable number per 100 ml.

<sup>3</sup> The Discharger shall report the daily average turbidity as well as the total amount of time each day that the turbidity exceeded 5 NTU and the total amount of time each day that the turbidity exceeded 10 NTU .

<sup>4</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: barium, calcium, magnesium, potassium, sulfate, total alkalinity (including alkalinity series), and hardness.

### STORAGE RESERVOIR MONITORING

Each of the storage reservoirs shall be sampled for the parameters specified below:

<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	pH units	Grab	Weekly	Monthly
Freeboard	0.1 feet	Observation	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 in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

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

### GOLF COURSE MONITORING

Monitoring of the effluent recycling site (golf course) shall be conducted daily and the results shall be included in the monthly monitoring report. Evidence of erosion, saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to ascertain loading rates at the application area. Monitoring of the golf course shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow <sup>1</sup>	mgd	Continuous	Daily	Monthly
Rainfall	Inches	Observation	Daily	Monthly
Application Rate <sup>2</sup>	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate <sup>2</sup>	lbs/ac/month	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate <sup>2</sup>	lbs/ac/month	Calculated	Monthly	Monthly

<sup>1</sup> Flow measurement shall be provided for effluent being supplied to the golf course

<sup>2</sup> For each land application area.

The entire irrigated area shall be periodically inspected during or immediately following an irrigation event to identify any equipment malfunction or other circumstances that might allow irrigation runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements. A daily log of these inspections shall be kept at the facility and made available for review upon request.

### GROUNDWATER MONITORING

The following shall constitute the groundwater monitoring program to begin the Second Quarter of 2004. Groundwater samples shall be collected from each groundwater monitoring well in accordance with an approved groundwater monitoring workplan. Prior to sampling or purging, equilibrated groundwater elevations shall be measured to the nearest 0.01 feet. The wells shall then be purged of at least three wetted well volumes until pH and electrical conductivity have stabilized. Sample collection and analysis shall follow standard EPA procedures. Each groundwater monitoring well shall be monitored at least for the following:

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH <sup>1</sup>	pH units	Grab	Quarterly	Quarterly
Boron	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Iron	mg/L	Grab	Quarterly	Quarterly

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
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
Total Trihalomethanes <sup>2</sup>	µg/L	Grab	Quarterly	Quarterly
Groundwater Elevation <sup>3</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
Standard Minerals <sup>4</sup>	mg/l	Grab	Annually	Annually

<sup>1</sup> Hand held field meter may be used.

<sup>2</sup> EPA Method 8020 or equivalent.

<sup>3</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>4</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### SLUDGE MONITORING

In accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, a composite sample of sludge shall be collected when removed from the effluent storage reservoirs 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, Nitrogen, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### SUPPLEMENTAL WATER SUPPLY (NEW HOGAN RESERVOIR)

A sampling station shall be established where a representative sample of the golf course supplemental water supply from New Hogan Reservoir can be obtained. Supplemental water supply 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 Dissolved Solids	mg/L	Grab	Quarterly <sup>2</sup>	Annually
Ph	pH units	Grab	Quarterly <sup>2</sup>	Annually
Electrical Conductivity	µmhos/cm	Grab	Quarterly <sup>2</sup>	Annually
Standard Minerals <sup>1</sup>	mg/l	Grab	Quarterly <sup>2</sup>	Annually

<sup>1</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Nitrogen, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

<sup>2</sup> During the second and third quarters of each year.

### REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, reservoir, 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 Monitoring and Reporting Program 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, effluent, storage reservoir, and golf course 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.

#### **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. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the 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 casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);



5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. 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
8. 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 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 and golf course;
4. The report of the annual cross-connection test performed in accordance with DHS requirements by a certified Cross Connection Control Specialist.
5. Verification of appropriate employee training for all personnel involved in operation and maintenance of the golf course irrigation system.
6. 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;
7. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
8. 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.
9. Summary of information on the disposal of sludge and/or solid waste;
10. The results from annual monitoring of groundwater wells, water supply, and supplemental water supply;
11. The results from any sludge monitoring required by the disposal facility; and

12. A forecast of influent flows, as described in Standard Provision No. E.4.

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:

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THOMAS R PINKOS, Executive Officer

\_\_\_\_\_  
6 December 2002

(Date)