

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0043
FOR
LAMONT PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY

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

Background

1. Lamont Public Utility District (Discharger) owns and operates a wastewater treatment facility (WWTF) in sections 24 and 25, Township 31 South, Range 28 East, MDB&M, in Kern County.
2. Community Recycling and Resource Recovery, Inc. (Community Recycling) conducts a composting operation on a portion of the land owned by the Discharger. This composting operation produces compost from primarily green waste and food scraps and other compostables collected by municipal waste haulers. The finished compost is sold to farmers for use as soil amendment and to companies for commercial sales.
3. The wastewater produced at the Discharger's WWTF is applied as irrigation water to 130 acres of land that produce fodder crops, and is used in Community Recycling's composting operations.
4. Waste Discharge Requirements (WDRs) Order 98-043, issued to the Discharger by the Central Valley Water Board on 27 February 1998, prescribes requirements for a monthly average discharge flow of 2.0 million gallons per day (mgd) of undisinfected secondary wastewater. The wastewater passes through the headworks, two aeration ponds, and two facultative ponds. The wastewater is first discharged to ponds, and is then either applied to 130 acres of land that produce fodder crops, and is used in Community Recycling's composting operations.
5. The Discharger has been experiencing disposal capacity problems since 1985. WDRs Order 98-043 included a time schedule that required the Discharger to increase treatment capacity at the WWTF and to ensure disposal capacity for a design flow of 3.25 mgd. The Board required the Discharger to submit the following in accordance with a prescribed time schedule: a new report of waste discharge that satisfied the requirements of Water Code section 13260, a water and nitrogen balance for the discharge of 3.25 mgd, a completed CEQA analysis for the proposed project, and a demonstration that the Discharger had secured long-term disposal capacity.

6. A January 1999 *Groundwater Monitoring Report* submitted by the Discharger indicated elevated concentrations of nitrates, total dissolved solids, and electrical conductivity in the groundwater near the facility, possibly due to the Discharger's disposal of wastewater. On 15 March 2000, the Central Valley Water Board issued Revised Monitoring and Reporting Program (MRP) 98-043, which imposed additional effluent, groundwater, and land management monitoring requirements to better understand groundwater conditions in the vicinity of the facility.
7. The Board issued Cease and Desist Order (CDO) R5-00-098 to the Discharger on 28 April 2000 because the Discharger continued to violate disposal capacity requirements, exceeded effluent BOD₅ and TSS limits, and low influent BOD₅ concentrations persisted. The CDO required the Discharger to address capacity issues and effluent limit violations, assess low influent BOD₅ concentrations, complete a short-term sludge removal project, and submit an Industrial Pretreatment Program. Although the Discharger constructed WWTF improvements, and although there was a temporary improvement in the Discharger's compliance with WDRs Order 98-043, the Discharger currently continues to violate BOD₅ and TSS effluent limits.
8. To address the disposal capacity issue, the Discharger had historically obtained short-term agreements with nearby farmers to take the effluent. However, in June 1993, the Discharger entered into a long-term lease agreement with Community Recycling. Community Recycling leases the following land from the Discharger:
 - a. approximately 215 acres of land on the west half of section 25, Township 31 South, Range 28 East, MDB&M;
 - b. approximately 160 acres of land in the southeast quarter of section 25, Township 31 South, Range 28 East, MDB&M; and
 - c. approximately 50 acres of land to the west of the WWTF.
9. The lease agreement requires Community Recycling to accept and dispose of all of the wastewater and sludge produced by the Discharger's WWTF. To address treatment capacity issues, the Discharger constructed two lined facultative ponds and two lined storage ponds on the north side of East Bear Mountain Boulevard in early 2008, in response to CDO R5-00-098.
10. WDRs Order R5-01-091, issued by the Central Valley Water Board on 27 April 2001, regulates Community Recycling's mixed-waste composting operation and its use of treated wastewater and sludge produced by the Discharger's WWTF. WDRs Order R5-01-091 was issued pursuant to Title 27 of the California Code of Regulations, which implements the State Water Board's regulations pertaining to waste management units.

11. The Discharger owns the land where wastewater is applied, and is responsible for ensuring that there is sufficient disposal capacity for the wastewater produced by the Discharger's WWTF.
12. Various amendments to the lease agreement between the Discharger and Community Recycling (described in Finding No. 8) were made in March 1996, June 1996, and June 2000. The Discharger and Community Recycling interpret the lease as extending to 30 June 2023.
13. On 15 November 2011, Kern County attempted to revoke the Conditional Use Permit (CUP) issued to Community Recycling. Without the CUP, Community Recycling cannot conduct recycling operations and, therefore, cannot legally dispose of the Discharger's wastewater. On 29 November 2011, Community Recycling and the District obtained a stay from Kern County Superior Court until the matter can be adjudicated.
14. While the stay is in effect, Community Recycling can continue to accept the Discharger's wastewater. Should the Superior Court overturn Kern County's revocation of the CUP, the composting facility will still be allowed to operate, and the Discharger may continue to provide wastewater to the composting operations. However, if the Court allows Kern County's revocation to stand, then the Discharger will have to find a different way to dispose of the wastewater that is currently going to the composting operation, and the Discharger must make these arrangements on a much shorter timeline than that currently provided for in the lease agreement between Community Recycling and the Discharger.
15. The Central Valley Water Board has not been provided adequate assurances that the Discharger would be able to provide adequate disposal capacity if the composting facility ceases operations.
16. The Discharger submitted a Title 22 Engineering Report to the California Department of Public Health (DPH) dated December 2003. In the report, the Discharger proposed to discharge its undisinfected secondary wastewater to 640 acres of vineyards in section 36 of Township 31 South, Range 28 East, MDB&M, owned by the T & R Fry Family Trust. DPH notified the Discharger that the discharge of undisinfected secondary recycled water to vineyards would not be authorized. The Discharger has not submitted an updated Title 22 Engineering Report to DPH.
17. WDRs Order 98-043 and CDO R5-00-098 need to be updated to reflect changes that the Discharger has made to its WWTF and to address unresolved compliance issues.

Wastewater Treatment and Disposal

18. The existing WWTF has a design flow capacity of 3.25 mgd and consists of a headworks, two aerated ponds, two new lined facultative ponds, two new lined storage ponds on the north side of East Bear Mountain Boulevard, and six older unlined storage ponds on the south side of East Bear Mountain Boulevard. Construction of the new ponds was completed in early 2008. A site map of the WWTF is shown on Attachment A, and a process flow schematic is shown on Attachment B, both of which are attached hereto and are considered a part of this Order.
19. On 30 March 2009, AECOM, on behalf of the Discharger, submitted a water balance to the Board based on a 100-year wet year. The water balance assumes 310 acres of agricultural land for recycling and a discharge of 1.2 mgd to the composting operation. The water balance shows that the WWTF has the storage capacity to accommodate the proposed flow of 3.25 mgd with the new ponds in place, though this does not ensure that there is sufficient disposal capacity for the wastewater produced at the WWTF.
20. In February 2012, the Discharger's engineer indicated the Discharger only has 130 acres of agricultural land on which it can recycle its effluent. Using the 30 March 2009 water balance, without the discharge to the composting facility, the Discharger has a disposal capacity of just under 2.0 mgd. In early 2012 the District's influent flow meter was calibrated and is now recording correct flows. Based on new data, the average daily influent flows are about 1.4 mgd. Given the current economic slow down, it is unclear what capacity is necessary to dispose of the District's effluent for a reasonable planning period of 20 years.

Wastewater Characteristics

21. Annual average wastewater influent and effluent characteristics for constituents of concern, based on data contained in the Discharger's Self-Monitoring Reports (SMRs) from January 2007 through May 2011, are tabulated in Table 1. In June 2008, flow was diverted to the new ponds. As denoted in the Table 1, data in 2008 are separated to show effluent quality before and after the new ponds were constructed.

Table 1. Influent and Effluent Quality

	Year	Flow mgd	BOD ₅ mg/L	TSS mg/L	EC umhos/cm	TDS ³ mg/L	pH pH Units
Average Influent	2007	2.22	320	434			
	2008 ¹	2.07	328	444			
	2008 ²	2.11	323	662			
	2009	1.63	495	890			
	2010	1.49	209	378			
	2011 ⁴		118	98			
Average Effluent	2007		44	63	992	645	8.8
	2008 ¹		33	43	1,105	718	8.0
	2008 ²		28	32	987	642	8.6
	2009		26	27	973	632	8.1
	2010		28	27	1,014	659	8.2
	2011		43	47	905	588	8.5

1 Data before new ponds were constructed

2 Data after new ponds were constructed

3 TDS value is calculated as (TDS = 0.65 x EC)

4 Flow was reported as 2.3 mgd every day for the months of February, March, and April and as 2.4 mgd every day for the months of May, August, and September. These flows may not be accurate and therefore are not tabulated.

22. WDRs Order 98-043 prescribes BOD₅ and TSS limits of 40 mg/L monthly average and 80 mg/L daily maximum. As shown in Table 1, the Discharger was meeting effluent BOD₅ and TSS limits in WDRs Order 98-043 from late 2008 through 2010, after the new facultative ponds were constructed. Effluent BOD₅ concentrations ranged from 26 to 28 mg/L, and effluent TSS concentrations ranged from 27 to 32 mg/L.
23. Self-Monitoring Reports for 2011 show that even with the treatment ponds that the Discharger added in 2008, effluent BOD₅ and TSS began to exceed the effluent limits in WDRs Order 98-043 at flows less than the 2.0 mgd flow limit and much less than the 3.25 mgd WWTF design capacity.
24. The average effluent EC for 2011 was 905 umhos/cm. Single sample results indicate that effluent chloride and sodium were 100 mg/L and 130 mg/L, respectively. There is no analytical data for total nitrogen. In June 2009, one effluent nitrate (as NO₃) sample was taken and reported by the Discharger as 3.2 mg/L.

Source Water Characteristics

25. Source water is obtained from eight water supply wells. The flow-weighted average source water EC was reported as 608, 576, and 560 umhos/cm in 2007, 2008, and 2009, respectively.

Wastewater Collection System

26. On 2 May 2006, the State Water Resources Control Board (hereafter State Water Board) adopted a General Sanitary Sewer System Order (State Water Board Water Quality Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*) (the "General Order"). The General Order requires that all public agencies that own or operate sanitary sewers systems greater than one mile in length comply with the General Order. The Discharger's collection system is greater than one mile in length. The Discharger has applied for, and is covered by, the General Order.

Site-Specific Conditions

27. Land uses in the vicinity of the WWTF are primarily agricultural. There is a dairy to the west of the WWTF, and the composting facility is to the south of the WWTF. The primary crops grown in the area are hay, alfalfa, carrots, melons, squash, and cucumbers, followed by corn, cotton, and sudangrass, according to the Kern County 2006 Land Use Map published by the Department of Water Resources (DWR). There are also vineyards south of the composting facility.
28. The WWTF and Use Area are in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through April. Average annual pan evaporation in the discharge area is about 84 inches, according to the California Climate Data Archive. The average annual precipitation in the discharge area is about 6 inches based on 30 years of data collected by the National Weather Service.
29. Soils in the vicinity of the WWTF are predominately Calflax Loam, followed by Kimberlina Fine Sandy Loam and Weedpatch Clay Loam, according to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service. Both Calflax Loam, and Weedpatch Clay Loam have a land capacity classification of 3s and Kimberlina Fine Sandy Loam has a land capacity classification of 1. Soils with "Class 3" classification have severe limitations that restrict the choice of plants or that require special conservation practices, or both. The subclass "s" indicates these soils have limitations within the root zone, such as shallowness of the root zone, a high content of stones, a low available water capacity, low fertility, or excessive salinity. Soils with "Class 1" classification have slight limitations that restrict their use.
30. According to the Federal Emergency Management Agency maps (Map Number 06029C2750E) the WWTF and composting facility are located within Zone X, an area outside of the 1% annual chance of inundation with water depth of one-foot or less.
31. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System General Industrial Storm Water Permit for the discharge because all

storm water runoff is retained onsite and does not discharge to a water of the United States.

Groundwater Considerations

32. Groundwater in the area of the WWTF is found at approximately 60 feet below ground surface. DWR maps and Kern County Water Agency maps indicate regional flow direction fluctuates from the northeast to the southeast, but is predominantly to the southeast.
33. Water quality maps in *Groundwater Pollutant Study* developed by Kern County Health Department (KCHD) show that in the 1970's, the TDS concentrations in the unconfined aquifer underlying portions of the Discharger's property were as high as 1,500 mg/L (EC of 2,308 umhos/cm). The study indicates that groundwater salinity generally improves to the east. The study contains an additional map (Plate 18) that depicts efforts of a groundwater model conducted at the time of study. The effort projects TDS concentrations in groundwater through 2000. The model results indicate that the area of poor quality groundwater will move east over the years.
34. The groundwater monitoring well network consists of seven monitoring wells. Monitoring wells MW-1 to MW-3 were installed by the Discharger in 1996 and monitoring wells MW-4 to MW-7 were installed by Community Recycling in 2002. Given the general groundwater flow direction, MW-3 is an upgradient well. Monitoring well MW-3 has an EC of 1,570 umhos/cm to 3,180 umhos/cm, chloride of 150 mg/L to 720 mg/L, sodium of 210 mg/L to 390 mg/L, and nitrate as nitrogen of 10 mg/L to 12 mg/L. MW-3 may possibly be influenced by the dairy discharges southwest of the well and other agricultural activities. MW-4 is also upgradient of the WWTF, adjacent to the composting facility, and downgradient of the dairy and may be degraded by the dairy and/or composting facility. Monitoring well MW-4 has an EC of 2,769 to 4,000 umhos/cm, chloride of 500 mg/L to 980 mg/L, sodium of 210 mg/L to 270 mg/L, and nitrate as nitrogen of 4 mg/L to 9 mg/L.
35. Findings 32, 33, and 34 indicate that groundwater is not of high quality with respect to EC and has not been high quality with respect to EC since at least the early 1970's. The shallow groundwater chloride concentrations exceed the secondary recommended Maximum Contaminant Level of 250 mg/L as well as the water quality concentration of 106 mg/L that is usually associated with the protection of the most salt-sensitive crops. Similarly, shallow groundwater sodium concentrations are routinely many times the concentration of 69 mg/L usually associated with the protection of the most salt-sensitive crops. Given the overall salinity in groundwater in the 1970's, it is likely that sodium and chloride have also historically been elevated. The salinity of groundwater is also likely due, in part, to the migration of salts from saline area soils, as described in Finding 29 above, to groundwater.

Pretreatment

36. Task 6 of CDO R5-00-098, required the Discharger to submit an Industrial Pretreatment Program that included: a revised ordinance, an enforcement response plan, an industrial waste survey, a staffing program, a monitoring program, a funding program, and methodology for establishing discharge limitations.
37. On 22 September 2008, Lamont Public Utility District adopted Ordinance No. 108, amending Ordinance No. 50 and establishing a Sewer Use Ordinance (the "Ordinance"). The Ordinance requires industrial users to obtain a permit from the Discharger prior to discharging waste to the Discharger's collection system. Section 100 of the Ordinance outlines different enforcement alternatives the Discharger can implement should users discharge in violation of its permit and/or the Ordinance. Section 500 of the Ordinance establishes discharge limits for several constituents (i.e., metals, pH, and BOD₅). In addition, the Discharger may impose mass limitations on users, where appropriate. The Ordinance authorizes the Discharger to inspect users who discharge to its collection system.
38. The Discharger submitted an Industrial Pretreatment Program dated 18 June 2009 and titled, *Preliminary Draft Industrial Pretreatment Program for Lamont Public Utility District* for approval by the Executive Officer.
39. The Discharger has one industrial user, Kern Ridge Growers, a local carrot packing plant. On 3 March 2000, the Discharger was issued a Notice of Violation for allowing Kern Ridge Growers to connect to the Discharger's collection system without obtaining information regarding the strength and volume of the wastewater. To date, the strength and volume of the wastewater from Kern Ridge Growers is unknown. The Discharger is preparing a pretreatment permit for Kern Ridge Growers.

Water Recycling

40. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organism as indicator organisms. DPH has primary statewide responsibility for protecting public health, has established statewide criteria in Title 22 of the California Code of Regulations ("Title 22") for the use of recycled water.
41. A 1996 Memorandum of Agreement (MOA) between DPH and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the regional water boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California. This Order implements the applicable portions of the Title 22 water recycling regulation in accordance with the MOA.

42. Section 60304 of Title 22 states that recycled wastewater used for the surface irrigation of the following shall be at least undisinfected secondary recycled water:
 - a. Orchards where the recycled water does not come into contact with the edible portion of the crop,
 - b. Vineyards where the recycled water does not come into contact with the edible portion of the crop,
 - c. Non food-bearing trees (Christmas tree farms are included in this category provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting or allowing access by the general public),
 - d. Fodder and fiber crops and pasture for animals not producing milk for human consumption,
 - e. Seed crops not eaten by humans,
 - f. Food crops that must undergo commercial pathogen-destroying processing before being consumed by humans, and
 - g. Ornamental nursery stock and sod farms provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting, retail sale, or allowing access by the general public.
43. On 8 January 2003, DPH distributed a memorandum to all regional water quality control boards recommending that orchard and vineyard crops be irrigated with water that meets, at minimum, the requirements for disinfected secondary-2.2 recycled water, as defined in section 60302.220 of Title 22.
44. On 3 February 2009, the State Water Board adopted Resolution 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy). The Recycled Water Policy promotes the use of recycled water to achieve sustainable local water supplies and reduce greenhouse gases.
45. On 23 April 2009, the Central Valley Water Board adopted Resolution R5-2009-0028, *In Support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants* (the "Regionalization Resolution"). The Regionalization Resolution encourages water recycling, water conservation, and the regionalization of wastewater treatment facilities. It requires discharges to document:
 - a. Effort to promote new or expanded wastewater recycling opportunities and programs;
 - b. Water conservation measures; and

- c. Regional wastewater management opportunities and solution (e.g. regionalization).

Recycling of effluent by the Discharger is consistent with the intent of the State Water Board's Recycled Water Policy and the Central Valley Water Board's Regionalization Resolution.

46. As described in Finding 16 above, DPH did not approve the Discharger's December 2003 Title 22 Engineering Report. Rather, by letter dated 10 February 2004, DPH commented that, pursuant to an 8 January 2003 memorandum from DPH to all the regional water quality control boards, effluent recycled on orchard and vineyard crops must meet the requirements for disinfected secondary 2.2 recycled water as specified in Section 60301.220 of Title 22. The letter further recommends that the Central Valley Water Board deny waste discharge requirements for the discharge of recycled water to vineyards in the Discharger's Title 22 Engineering Report. Neither Lamont Public Utility District nor Community Recycling has submitted a revised Title 22 Engineering Report to the Board.

Basin Plan, Beneficial Uses, and Water Quality Objectives

47. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004* (the "Basin Plan") designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Board. In accordance with Water Code section 13263(a), these waste discharge requirements implement the Basin Plan.
48. The Basin Plan specifies that municipal and domestic wastewater dischargers will be required to reclaim and reuse wastewater whenever reclamation is feasible.
49. The WWTF is in Detailed Analysis Unit (DAU) No. 254, within the Kern County Basin hydrologic unit. The Basin Plan identifies the beneficial uses of groundwater in the DAU as municipal and domestic supply, agricultural supply, industrial service and industrial process supply, water contact and non-contact water recreation, and wildlife habitat.
50. The WWTF is in the Kern Delta Hydrologic Area (No. 557.10) of the South Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986.
51. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

52. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.
53. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:
- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
 - b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.
54. The Basin Plan requires municipal WWTFs that discharge to land to comply with treatment performance standards for BOD₅ and TSS. WWTFs that preclude public access and are greater than 1 mgd must provide removal of 80 percent or reduction to 40 mg/L, whichever is more restrictive, for both BOD₅ and TSS.

Antidegradation Analysis

55. State Water Board Resolution No. 68-16 (*"Policy with Respect to Maintaining High Quality Water of the State"*) (the "Antidegradation Policy") prohibits degradation of groundwater unless it has been shown that:
- a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - c. The Discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and
 - d. The degradation is consistent with the maximum benefit to the people of the state.

56. Constituents of concern in the discharge include salts and nutrients.

- a. For salinity, the Basin Plan contains effluent limits of EC of source water plus 500 umhos/cm and 1,000 umhos/cm maximum for discharges to areas that may recharge to good quality groundwater. As the Tulare Lake Basin is a closed basin, these limits are designed to control the rate of groundwater degradation with respect to salinity. With a source water EC of 560 umhos/cm, the average discharge EC of 996 umhos/cm meets the Basin Plan limit of source water plus 500 umhos/cm (1,060 umhos/cm). In the 1970's, first encountered groundwater EC was documented to be as high as 2,308 umhos/cm. More recent shallow groundwater data indicates background EC's range from 1,570 umhos/cm to 3,180 umhos/cm. The EC of the discharge is much less than the baseline EC of first encountered groundwater and is not expected to degrade groundwater with respect to EC.
- b. For sodium and chloride, first encountered groundwater concentrations are as high as 420 mg/L and 980 mg/L, respectively. As described in Findings 32 through 35 groundwater sodium and chloride concentrations exceed concentrations necessary to protect the most salt-sensitive crops and the chloride concentration exceeds the recommended MCL of 250 mg/L and, at times, the upper MCL of 500 mg/L necessary to protect municipal and domestic use. It is likely that these exceedances have been occurring since the 1970's or before. Available effluent data indicates that the discharge will not further degrade groundwater beyond the baseline conditions.
- c. For nitrogen, data from shallow groundwater monitoring wells contains nitrate concentrations in excess of water quality objectives, possibly as a result of previous discharges, and likely also from agricultural practices in the area. Historical (i.e., 1970s) data does not show nitrate issues in shallow groundwater near the WWTF; however, the wells sampled were likely drawing from deeper, better quality waters than the shallower groundwater monitoring wells. The limited effluent data for nitrate indicates that the WWTF effluent will not exacerbate existing exceedances of water quality objectives. This data set needs to be expanded to fully characterize the discharge for nitrogen species. This Order requires the Discharger to characterize effluent quality with respect to nitrogen species. To protect the MUN designated beneficial use, Groundwater Limitations proscribe the discharge from increasing groundwater nitrate (as N) concentration beyond the MCL of 10 mg/L. Given that there will be nitrogen losses in the percolation ponds and as treated effluent percolates to groundwater, the nitrate (as N) concentration in effluent reaching groundwater will be less than the MCL of 10 mg/L. Therefore, the discharge is not expected to degrade groundwater water quality with nitrates.
- d. Regarding other constituents, coliform in groundwater is limited to the Basin Plan water quality objective of less than 2.2 MPN/100 mL or essentially non-detect. Taste or odor-producing constituents, toxic substances, and other constituents are limited

to concentrations such that they do not cause nuisance or adversely affect beneficial uses of groundwater.

Treatment and Control Practices

57. The WWTF described in Findings 18 and 20, will provide treatment and control of the discharge that incorporates:
- a. Secondary treatment of wastewater;
 - b. Sludge management;
 - c. Recycling of wastewater;
 - d. An operation and maintenance manual;
 - e. Implementation of Salinity Management Plan;
 - f. Implementation of Nutrient Management Plan;
 - g. Certified operators to ensure proper operation and maintenance; and
 - h. Source water, discharge, and groundwater monitoring.

The Board finds that the preceding treatment and control measures represent BPTC for these discharges.

58. Generally, limited degradation of groundwater by some of the typical waste constituents of concern (e.g., EC and nitrate) released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the state. The technology, energy, 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 impacts on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the state, and therefore provides sufficient reason to accommodate planned growth and allow for very limited groundwater degradation.

Antidegradation Conclusions

59. This Order establishes terms and conditions to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater or result in groundwater quality that exceeds baseline conditions.

60. The treatment and control measures described above in Finding 57 represent a higher level of water quality protection measures than those employed by the Discharger in previous years, and represent BPTC.
61. This Order requires extensive monitoring to evaluate potential groundwater impacts from the discharge and to confirm that the treatment and control measures are sufficiently protective of groundwater. In addition, this Order includes provisions requiring the Discharger to submit a Salinity Management Plan and a Nutrient Management Plan.
62. This Order prohibits the discharge from degrading groundwater beyond baseline conditions.

CEQA

63. The Lamont Public Utility District approved an expansion project for the WWTP on 13 September 2004. The expansion project included the construction of two facultative ponds, two storage ponds, a pumping station, and piping modifications to incorporate the new ponds into the existing facility. The Lamont Public Utility District acted as the lead agency for the project approval pursuant to the California Environmental Quality Act (CEQA). The Lamont Public Utility District approved a Negative Declaration for the project, and subsequently filed a Notice of Determination (SCH # 2004071025) on 21 September 2004. The Negative Declaration stated that the project would have no significant effects on the environment, provided that the proposed storage ponds were properly lined to prevent any groundwater contamination. The storage ponds were constructed with liners. Central Valley Water Board staff reviewed the Negative Declaration and concurred with the conclusion that the expansion of the pond system would not have a significant effect on the environment and on underlying groundwater quality.
64. These waste discharge requirements impose additional regulatory requirements on a discharge that is currently ongoing, and does not authorize any additional construction activities. The issuance of these requirements is exempt from CEQA pursuant to the categorical exemption for the existing facilities. (Cal. Code Regs., tit. 14, §15301.)

Designated Waste and Title 27

65. California Code of Regulations, title 27 ("Title 27") contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt sewage, wastewater, and reuse. These exemptions, found at Title 27, section 20090, are described below:

(a) Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this

code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludge or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

(b) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

- (1) The applicable regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
- (2) The discharge is in compliance with applicable water quality control plan; and
- (3) The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

* * *

(h) Reuse – Recycling or other use of materials salvaged from waste, or produced by waste treatment, such as scrap metal, compost, and recycled chemicals, provided that discharges of residual wastes from recycling or treatment operations to land shall be according to applicable provisions of this [Title 27].

66. The discharge authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, sections 20090(a) and (b) because:
- a. The Central Valley Water Board is issuing WDRs.
 - b. The discharge is in compliance with the Basin Plan, and;
 - c. The treated effluent discharged to the Use Area does not need to be managed as hazardous waste.

The reuse of wastewater for irrigation as authorized by this Order is exempt from Title 27 under section 20090(h) for Reuse, since the wastewater is contained and treated to make it suitable for direct beneficial reuse and is discharged in manner consistent with crop requirements. In addition, the Discharge of wastewater and sewage sludge to the composting operation is regulated under a Title 27 Order and complies with the regulatory requirements of Title 27.

Other Regulatory Considerations

67. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 Code of Federal Regulations part 503, Standards for the Use or Disposal of Sewage Sludge, which establish management criteria for protection of ground and surface waters, sets limits and application rates for heavy metals, and establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA.

General Findings

68. Pursuant to 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.

69. Water Code section 13267(b) states that:

In conducting an investigation specified in subdivision (a), the Central Valley Water 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 Central Valley Water 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 Central Valley Water 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.

70. The technical reports required by this Order and monitoring reports required by the attached MRP R5-2012-0043 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the wastewater treatment facility that discharges the waste subject to this Order.

Public Notice

71. 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 conditions of discharge of this Order.

72. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

73. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 98-043 is rescinded and that, pursuant to Water Code sections 13263 and 13267, Lamont Public Utility District, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.

2. Bypass or overflow of untreated wastes, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in California Code of Regulations, title 23, section 2521(a), is prohibited. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Discharge of wastewater in a manner or location other than that described herein is prohibited.

B. Effluent Limitations

1. The effluent shall not have a pH less than 6.5 or greater than 9.0.
2. Effluent shall not exceed the following limitations:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ₅ ¹	mg/L	40	80
TSS ²	mg/L	40	80

¹ Five-day biochemical oxygen demand

² Total suspended solids

3. The arithmetic mean of BOD₅ and TSS in effluent samples collected over a monthly period shall not exceed 20 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (80 percent removal).
4. The 12-month rolling average EC of the discharge shall not exceed the 12-month rolling average EC of the source water plus 500 umhos/cm. Compliance with this effluent limitation shall be determined monthly.

C. Discharge Specifications

1. The monthly average dry weather discharge flow shall not exceed 2.0 mgd.
2. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of Groundwater Limitations of this Order.
3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
6. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. Public contact with effluent (treatment works, percolation ponds) shall be precluded through such means as fences, signs, or acceptable alternatives.
8. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
9. The treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. 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. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specification C.9.
11. All ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.
 - c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
 - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
12. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in 1 July 2012, and shall periodically remove sludge as necessary to maintain adequate treatment and storage capacity.

D. Recycling Specifications

The following specifications apply to the Use Area under the ownership or control of the Discharger:

1. For the purpose of this Order, "Use Area" means an area with defined boundaries where recycled water is used or discharged.
2. The production, distribution, and use of recycled water shall conform to an Engineering Report prepared pursuant to Title 22, section 60323 and approved by the California Department of Public Health.
3. The use of recycled water shall not cause pollution or nuisance, as defined by Water Code section 13050.
4. The recycled water shall be at least undisinfected secondary recycled water as defined by Title 22, section 60301.
5. Recycled water shall be used in compliance with Title 22, section 60304. Specifically, uses of recycled water shall be limited to those set forth in Title 22, section 60304(d), except that undisinfected recycled water shall not be discharged to orchard or vineyard crops.
6. Tailwater runoff and spray of recycled water shall not be discharged outside of the Use Areas.
7. No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with the edible portion of food crops that may be eaten raw by humans.
8. Irrigation of the Use Areas shall occur only when appropriately trained personnel are on duty.
9. Use areas shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order.
10. Grazing of milking animals within the Use Areas is prohibited.
11. Hydraulic loading of recycled water and supplemental irrigation water shall be at reasonable agronomic rates designed to :
 - a. Maximize crop nutrient uptake;
 - b. Maximize breakdown of organic waste constituents in the root zone; and

- c. Minimize the percolation of waste constituents to minimize erosion within the Use Areas.
12. The irrigation with recycled water shall be managed to minimize erosion within the Use Areas.
13. The Use Areas shall be managed to prevent breeding of mosquitoes. In particular:
- a. There shall be no standing water 48 hours after irrigation ceases;
 - b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
14. Use Areas and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:

Setback Definition	Minimum Irrigation Setback (feet)
Edge of Use Area to property boundary	25
Edge of Use Area to public road right of way	30
Edge of Use Area to manmade or natural surface water drainage course	50
Edge of Use Area to domestic water supply well	150
Toe of recycled water impoundment berm to domestic water supply well	150

15. Potable water supply piping and recycled water piping shall not have any cross-connections. Supplementing recycled water with potable water shall not be allowed through an air-gap separation or, if approved by DPH, a reduced pressure principle backflow device.
16. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting recycled water and those transporting domestic supply, and the domestic supply pipeline shall be located above the recycled water pipeline.
17. Any backflow prevention device installed to protect a public water system shall be inspected and maintained in accordance with Title 17, section 7605.

18. All reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All reclamation distribution system piping shall be purple or adequately wrapped with purple tape.
19. Recycled water controller, valves, and similar 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 Title 22, section 60310. 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.
20. Public contact with recycled water shall be controlled using signs and/or other appropriate means. Signs of a size no less than four inches high by eight inches wide with proper wording (shown below) shall be placed at all areas of public access and around the perimeter of all areas used for effluent disposal or conveyance to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in Attachment C, which is attached hereto and a part of this Order, and present the following wording:

“RECYCLED WATER – DO NOT DRINK”

“AGUA DE DESPERDICIO RECLAMADA – POR FAVOR NO TOME”

21. Recycled water shall not be allowed to escape from the authorized Use Area by airborne spray or by surface flow except in minor amounts such as that associated with good irrigation practices.
22. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
23. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
24. Workers shall be educated regarding proper hygienic procedures to ensure personal and public safety.
25. Application of waste constituents to the Use Area shall be at reasonable agronomic rates to preclude creation of pollution, nuisance, or degradation of groundwater, considering soil, climate, and nutrient demand. The annual nutrient loading of the Use Area, including the nutritive value of organic and chemical fertilizers and recycled water, shall not exceed crop demand.

26. The Use of recycled water shall comply with the Provisions of Title 22. Further, the Discharger and/or Users must obtain written approval from the Executive Officer prior to use of recycled water for uses other than those specified in this Order.
27. The Use Area parcels shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties

E. Solids Disposal Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advance wastewater treatment processes. Solid waste refers to grit and screening material 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 been treated and tested and shown to be capable of being beneficially used as soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations.

1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc., as needed to ensure optimal plant operation.
2. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
3. Residual sludge, solid waste, and biosolids 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 sites (i.e., landfill, composting sites, and soil amendment sites) operated in accordance with valid waste discharge requirements will satisfy this specification.
4. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board or a local (e.g., county) program authorized by a regional water board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-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 authorized by the General Biosolids Order, the Discharger must file a complete Notice of Applicability for each project.
5. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

F. Groundwater Limitations

1. Release of waste constituents from any treatment, reclamation or storage component associated with the discharge shall not cause or contribute to groundwater:
 - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:
 - (i) Nitrate (as N) of 10 mg/L.
 - (ii) Total Coliform Organisms of 2.2 MPN/100 mL.
 - (iii) For constituents identified in Title 22, the MCLs quantified therein.
 - b. Contain EC that exceeds baseline groundwater conditions.
 - c. Containing taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

G. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions), which are part of this Order.
2. The Discharger shall comply with MRP R5-2012-0043, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
4. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
5. The Discharger shall not allow pollutant-free wastewater to be discharged into the WWTF collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report

due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

7. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
8. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
9. The Discharger shall implement its Ordinance (*Ordinance No. 108 An Ordinance of the Lamont Public Utility District Amending Ordinance 50 and Establishing a Sewer Use Ordinance*) and its 2009 *Preliminary Draft Industrial Pretreatment Program for Lamont Public Utility* and any other necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible waste are:
 - a. Wastes which create a fire or explosion hazard in the treatment works;
 - b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;
 - c. Solids or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
 - d. Any waste, including oxygen demanding pollutants (BOD₅, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
 - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40 °C (104 °F), unless the treatment works is designed to accommodate such heat;

- f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants, except at points predesignated by the Discharger.
10. The Discharger shall implement its Ordinance (*Ordinance No. 108 An Ordinance of the Lamont Public Utility District Amending Ordinance 50 and Establishing a Sewer Use Ordinance*) and its 2009 *Preliminary Draft Industrial Pretreatment Program for Lamont Public Utility* and any other necessary legal authorities, programs, and control necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:
- a. Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
 - b. Inhibit or disrupt treatment process, treatment systems operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.
11. The Discharger shall provide certified wastewater treatment plant operators in accordance with California Code of Regulations, title 23, division 3, chapter 26.
12. The Discharger shall report to the Central Valley Water 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."
13. As a means of discerning compliance with Discharge Specification C.8, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
14. The Discharger shall maintain and operate surface impoundments sufficiently to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger

shall install and maintain a permanent marker with calibration that indicates the water level at the design capacity and enables determination of available operational freeboard.

15. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.
16. All technical reports and work plans 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. As required by these laws, completed technical reports and work plans 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. All reports required herein are required pursuant to Water Code section 13267.
17. The Discharger shall continue to maintain coverage under, and comply with Statewide General Waste Discharge Requirements (General WDRs) for Sanitary Sewer Systems (Water Quality Order 2006-0003-DWQ), the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC), and any revisions thereto. Water Quality Orders 2006-0003-DWQ and 2008-0002-EXEC require the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.
18. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
19. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, 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 the Central Valley Water Board.
20. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or

operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

21. **By 5 September 2012**, the Discharger shall submit a revised Title 22 Engineering Report in accordance with Title 22, section 60323. A copy of this report shall be provided to DPH. This provision shall be considered satisfied upon submittal by the Discharger of a letter from DPH determining the report is complete.
22. **By 7 June 2013**, the Discharger shall submit a technical report that evaluates and characterizes effluent quality with respect to nitrogen species.
23. **By 6 August 2012**, the Discharger shall submit a Work Plan with a time schedule for approval by the Executive Officer to conduct a groundwater investigation to determine baseline water quality.
24. **By 30 August 2012**, the Discharger shall submit a technical report that describes the final disposal of sludge removed from aeration pond No. 2 along with sludge monitoring data required by Monitoring and Reporting Program R5-2012-0043.
25. **By 6 August 2012**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan should identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan. The Discharger shall implement the plan in accordance with the approved schedule.
26. **By 6 August 2012**, the Discharger shall submit a Nutrient and Wastewater Management Plan for the Use Areas for Executive Officer approval. The Plan shall determine the amount of EC and nutrients that crops grown in the Use Area(s) will take up. The objective of this Plan shall be to identify and utilize site specific data to determine the appropriate pounds per acre of process wastewater that may be applied to the Use Area.
27. **By 5 September 2012**, the Discharger shall install an effluent flow meter and begin effluent flow monitoring of its wastewater in accordance with Monitoring and Reporting Program R5-2012-0043.
28. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for

groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for potential constituents.

29. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filling petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/

or will be provided upon request.

I, PAMELA C. CREEDON, 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 8 June 2012.

Original signed by:

PAMELA C. CREEDON, Executive Officer

Order Attachments:

A Site Location Map

B Flow Schematic

C Recycled Water Signage

Monitoring and Reporting Program R5-2012-0043

Information Sheet

Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0043
FOR
LAMONT PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY

This monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer and in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for the requested reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 10 and a list of the constituents required for the monitoring of Priority Pollutants is included in Table 1, which is on page 11.

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks of the WWTF. Time of collection of the sample shall be recorded. Influent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH units	Grab
Weekly	EC	umhos/cm	Grab
Weekly	TDS	mg/L	Grab
Weekly	TSS	mg/L	24-hour composite
Weekly	BOD ₅	mg/L	24-hour composite
Monthly	Monthly Average Discharge Flow	mg/L	Computed

EFFLUENT MONITORING

Effluent samples shall be collected at a point in the system following treatment and before discharge to the effluent storage ponds or Use Area. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow ¹	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	umhos/cm	Grab
Weekly	BOD ₅	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Monthly	TDS	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Monthly	TKN	mg/L	24-hour composite
Monthly	Ammonia Nitrate	mg/L	24-hour composite
Monthly	Chloride	mg/L	24-hour composite
Monthly	Sodium	mg/L	24-hour composite
Biannually ²	General Minerals	mg/L	24-hour composite
Once every 5 Years ³	Priority Pollutants (see Table 1)	Varies ⁴	Varies

¹ Beginning flow monitoring upon satisfaction of Provision G.27.

² Biannually monitoring shall consist of two samples per year.

³ Beginning in July 2012.

⁴ mg/L or ug/L, as appropriate.

POND MONITORING

Permanent markers (e.g., staff gages) shall be placed in all storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard. Effluent storage pond monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	DO ¹	mg/L	Grab
Weekly	Freeboard	Feet ²	Observation
Weekly	Odors	---	Observation
Weekly	Berm Condition	---	Observation

¹ Should the DO be below 1.0 mg/L during a weekly sampling event, the Discharger shall take all reasonable steps to correct the problem and commence daily DO monitoring in the affected ponds until the problem has been resolved.

² To the nearest tenth of a foot.

The Discharger shall inspect the condition of the storage ponds weekly and record visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether grease, dead algae, vegetation, scum, or debris are accumulating on the storage pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

GROUNDWATER MONITORING

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of standing water within the well casing and screen, or additionally the filter pack pore volume. Samples shall be collected and analyzed for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Depth to groundwater	Feet ¹	Measured
Quarterly	Groundwater Elevation	Feet ²	Calculated
Quarterly	pH	pH units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	TDS	mg/L	Grab
Quarterly	Nitrate (as N)	mg/L	Grab
Quarterly	TKN	mg/L	Grab
Quarterly	Ammonia	mg/L	Grab

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	General Minerals ³	mg/L	Grab

¹ To the nearest tenth of a foot.

² To the nearest tenth of a foot above mean Sea Level

³ With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24-hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

SOURCE WATER MONITORING

For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements. Alternatively, the Discharger may establish representative sampling stations within the distribution system serving the same area as is served by the WWTF.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Flow-Weighted EC	umhos/cm	Computed Average
Annually	General Minerals ¹	mg/L	Grab

¹ With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

BIOSOLIDS/SLUDGE MONITORING

Sludge shall be sampled for the following constituents:

Arsenic	Copper	Nickel
Cadmium	Lead	Selenium
Molybdenum	Mercury	Zinc

Monitoring shall be conducted: using the methods in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846) and updates thereto, as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4). The constituents listed above shall be monitored at the following frequency, depending on volume generated:

<u>Volume Generated (dry metric tons/year)</u>	<u>Frequency</u>
0 to 290	Annually
290 to 1,500	Quarterly
1,500 to 15,000	Bimonthly (six samples per year)
Greater than 15,000	Monthly

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogens reduction levels by one of the methods listed in 40 CFR, Part 503.32. The Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b).

USE AREA MONITORING

The Discharger shall perform the routine monitoring and loading calculations for each discrete irrigation area within the Use Area. Data shall be collected and presented in tabular format in accordance with Table 2.

In addition, the Discharger shall inspect the Use Area, at a minimum of, on a weekly basis. Evidence of erosion, field saturation, runoff, of the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and included as part of the quarterly monitoring reports.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report: **1 May**
Second Quarter Monitoring Report: **1 August**
Third Quarter Monitoring Report: **1 November**
Fourth Quarter Monitoring Report: **1 February**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring and annual reports, as well as report transmittal letters, submitted to the Central Valley Water Board:

Discharger Name
Facility Name
MRP Number
Contact Information (telephone number and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports 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.

At any time henceforth, the State or Central Valley Regional Water Board may notify the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Until such notification is given, the Discharger shall submit hard copy monitoring reports.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater reporting

1. The results of Influent, Effluent, and Pond Monitoring specified on page 2 and 3.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.
3. For each of the quarters, calculation of the 12-month rolling average EC of the discharge using the EC value for that month averaged with EC values for the previous 11 months.

4. For each month of the quarter, calculation of the monthly average effluent BOD₅ and TSS concentrations, and calculation of the percent removal of BOD₅ and TSS compared to the influent.
5. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Groundwater reporting

1. The results of Groundwater Monitoring specified on page 3 and 4.
2. For each monitoring well, a table showing constituent concentrations for at least five previous years, if available up through the current quarter.
3. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow under/around the facility and/or effluent disposal area(s). The map shall also include the locations of monitoring wells and wastewater discharge areas.

Source water reporting

1. The results of Source Water Monitoring specified on page 4.
2. For each month of the quarter, calculation of the flow-weighted 12-month rolling average EC of the source water using monthly flow data and the source water EC values for the most recent four quarters.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Wastewater treatment facility information

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).

4. A statement whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. The results of an annual evaluation conducted pursuant to Standard Provision E.4 and a figure depicting monthly average discharge flow for the previous five calendar years.
6. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

Biosolids/Sludge monitoring

1. Annual production totals in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
 - b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
 - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
 - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.

Use Area reporting

1. The type of crop(s) grown in the Use Area, and the quantified hydraulic and nitrogen loading rates in accordance with Table 2.
2. A summary of the notations made in the Use Area monitoring log during each quarter. The entire contents of the log do not need to be submitted.

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

Ordered by: Original signed by:
PAMELA C. CREEDON, Executive Officer

8 June 2012

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand		
CBOD	Carbonaceous BOD		
DO	Dissolved oxygen		
EC	Electrical conductivity at 25° C		
FDS	Fixed dissolved solids		
NTU	Nephelometric turbidity unit		
TKN	Total Kjeldahl nitrogen		
TDS	Total dissolved solids		
TSS	Total suspended solids		
Continuous	The specified parameter shall be measured by a meter continuously.		
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.		
Daily	Samples shall be collected at least every day.		
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.		
Weekly	Samples shall be collected at least once per week.		
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.		
Monthly	Samples shall be collected at least once per month.		
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.		
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.		
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.		
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.		
mg/L	Milligrams per liter		
mL/L	milliliters [of solids] per liter		
ug/L	Micrograms per liter		
umhos/cm	Micromhos per centimeter		
mgd	Million gallons per day		
MPN/100 mL	Most probable number [of organisms] per 100 milliliters		
General Minerals	Analysis for General Minerals shall include at least the following:		
	Alkalinity	Chloride	Sodium
	Bicarbonate	Hardness	Sulfate
	Calcium	Magnesium	TDS
	Carbonate	Potassium	Nitrate
	General Minerals analyses shall be accompanied by documentation of cation/anion balance.		

Table 1. Priority Pollutant Scan

<u>Inorganics</u>¹	<u>Organics</u>	3-Methyl-4-Chlorophenol	Hexachlorobenzene
Antimony	Acrolein	Pentachlorophenol	Hexachlorobutadiene
Arsenic	Acrylonitrile	Phenol	Hexachlorocyclopentadiene
Beryllium	Benzene	2,4,6-Trichlorophenol	Hexachloroethane
Cadmium	Bromoform	Acenaphthene	Indeno(1,2,3-c,d)pyrene
Chromium (III)	Carbon tetrachloride	Acenaphthylene	Isophorone
Chromium (VI)	Chlorobenzene	Anthracene	Naphthalene
Copper	Chlorodibromomethane	Benzidine	Nitrobenzene
Lead	Chloroethane	Benzo(a)Anthracene	N-Nitrosodimethylamine
Mercury	2-Chloroethylvinyl Ether	Benzo(a)pyrene	N-Nitrosodi-n-Propylamine
Nickel	Chloroform	Benzo(b)fluoranthene	N-Nitrosodiphenylamine
Selenium	Dichlorobromomethane	Benzo(g,h,i)perylene	Phenanthrene
Silver	1,1-Dichloroethane	Benzo(k)fluoranthene	Pyrene
Thallium	1,2-Dichloroethane	Bis(2-chloroethoxy) methane	1,2,4-Trichlorobenzene
Zinc	1,1-Dichloroethylene	Bis(2-chloroethyl) ether	
Cyanide	1,2-Dichloropropane	Bis(2-chloroisopropyl) ether	<u>Pesticides</u>
Asbestos	1,3-Dichloropropylene	Bis(2-Ethylhexyl)phthalate	Aldrin
	Ethylbenzene	4-Bromophenyl phenyl ether	alpha-BHC
<u>Dioxin Congeners</u>	Methyl Bromide	Butylbenzyl Phthalate	beta-BHC
2,3,7,8-TCDD	Methyl Chloride	2-Chloronaphthalene	gamma-BHC (Lindane)
1,2,3,7,8-PentaCDD	Methylene Chloride	4-Chlorophenyl Phenyl Ether	delta-BHC
1,2,3,4,7,8-HexaCDD	1,1,2,2-Tetrachloroethane	Chrysene	Chlordane
1,2,3,6,7,8-HexaCDD	Tetrachloroethylene (PCE)	Dibenzo(a,h)Anthracene	4,4'-DDT
1,2,3,7,8,9-HexaCDD	Toluene	1,2-Dichlorobenzene	4,4'-DDE
1,2,3,4,6,7,8-HeptaCDD	1,2-Trans-Dichloroethylene	1,3-Dichlorobenzene	4,4'-DDD
OctaCDD	1,1,1-Trichloroethane	1,4-Dichlorobenzene	Dieldrin
2,3,7,8-TetraCDF	1,1,2-Trichloroethane	3,3'-Dichlorobenzidine	alpha-Endosulfan
1,2,3,7,8-PentaCDF	Trichloroethylene (TCE)	Diethyl phthalate	beta-Endosulfan
2,3,4,7,8-PentaCDF	Vinyl chloride	Dimethyl phthalate	Endosulfan Sulfate
1,2,3,4,7,8-HexaCDF	2-Chlorophenol	Di-n-Butyl Phthalate	Endrin
1,2,3,6,7,8-HexaCDF	2,4-Dichlorophenol	2,4-Dinitrotoluene	Endrin Aldehyde
1,2,3,7,8,9-HexaCDF	2,4-Dimethylphenol	2,6-Dinitrotoluene	Heptachlor
2,3,4,6,7,8-HexaCDF	2-Methyl-4,6-Dinitrophenol	Di-n-Octyl Phthalate	Heptachlor epoxide
1,2,3,4,6,7,8-HeptaCDF	2,4-Dinitrophenol	1,2-Diphenylhydrazine	Polychlorinated biphenyls
1,2,3,4,7,8,9-HeptaCDF	2-Nitrophenol	Fluoranthene	Toxaphene
OctaCDF	4-Nitrophenol	Fluorene	

¹ With the exception of wastewater samples, samples for metals analysis must first be filtered. If filtering in the field is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain of custody form) to immediately filter then preserve the sample.

² Samples to be analyzed for volatile compounds and phthalate esters shall be grab samples; the remainder shall be 24-hour composite samples.

Table 2. Use Area Monitoring

Recycled Water Monitoring Data For Year: _____								
Parcel No. _____ of _____ acres								
		Water application				Nitrogen application		
		Water required	Effluent used	Other water used	Total irrigation water	As fertilizer	As effluent*	Total nitrogen applied
Month	Crop	(AF)	(AF)	(AF)	(AF)	(lbs/acre)	(lbs/acre)	(lbs/acre)
October								
November								
December								
Subtotal:								
January								
February								
March								
Subtotal:								
April								
May								
June								
Subtotal:								
July								
August								
September								
Subtotal:								
Annual Total:								
* calculated as (AF effluent/acre) x (2.72) x (X mg/l total nitrogen) = lbs nitrogen/acre								

INFORMATION SHEET

INFORMATION SHEET-ORDER R5-2012-0043
LAMONT PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY

Background

Waste Discharge Requirements (WDRs) Order 98-043, issued to Lamont Public Utility District (Discharger), regulates discharges from the Discharger's wastewater treatment facility (WWTF). WDRs Order 98-043 authorizes a discharge of 2.0 million gallons per day (mgd) of wastewater to oxidation/storage ponds and to Community Recycling and Resource Recovery, Inc., (Community Recycling). Community Recycling leases farmland south of the WWTF from the Discharger for green waste composting. Currently 130 acres are available for reclamation to grow fodder crops. Community Recycling's use of recycled water and sludge produced by the Discharger's WWTF for its green waste composting process is regulated under WDRs Order 5-01-09.

The Discharger has consistently violated WDRs Order 98-043. On 28 April 2000, the Central Valley Water Board issued Cease and Desist Order R5-00-098 (the "CDO") to the Discharger for violating disposal capacity requirements, exceeding effluent BOD₅ and TSS limits, and having low influent BOD₅ concentrations. The CDO required the Discharger to address capacity issues and effluent limit violations, assess low influent BOD₅ concentrations, complete a short-term sludge removal project, and submit an Industrial Pretreatment Program to the Central Valley Water Board for approval by the Executive Officer.

In response to the CDO, the Discharger constructed two new lined facultative ponds and two new lined storage ponds in 2008. To address the disposal capacity issue, the Discharger entered into a long-term lease agreement with Community Recycling. In late 2011, the District's flow meter was recalibrated and now records correct flows. Based on new data effluent flows are approximately 1.4 mgd. Community Recycling reportedly uses 1.2 mgd for its composting operation. The lease agreement requires Community Recycling to manage and dispose of all of the Discharger's effluent. Effluent not used in the compost operation is reclaimed by Community Recycling on 130 acres owned by the Discharger to grow fodder crops.

The existing WWTF consists of a headworks, two aerated ponds, two lined facultative ponds, two lined storage ponds, and six older unlined storage ponds.

On 15 November 2011, Kern County purported to revoke the Conditional Use Permit (CUP) issued to Community Recycling. Community Recycling is proceeding with plans to conduct a clean closure of the composting facility pursuant to conditions in WDRs Order 5-01-091.

Groundwater Conditions

In the vicinity of the WWTF regional groundwater flow fluctuates from northeast to the southeast direction, but is predominantly to the southeast and is found at approximately 60 feet below ground surface (bgs).

Water quality maps in *Groundwater Pollutant Study* developed by Kern County Health Department (KCHD) show that, in the 1970's, the TDS concentrations in the unconfined aquifer underlying portions of the Discharger's property were as high as 1,500 mg/L (EC of 2,308 umhos/cm). The study indicates that groundwater salinity generally improves to the east. The study contains an additional map (Plate 18) that depicts a groundwater modeling effort conducted at the time of study. The effort projects TDS concentrations in groundwater through 2000. The model results indicate that the area of poor quality groundwater will move east over the years.

The WWTF has 7 groundwater monitoring wells (MW-1 through MW-7). Groundwater data for these monitoring wells is tabulated below.

		EC (μ mhos/cm)	TDS (mg/L)	Chloride (mg/L)	Sodium (mg/L)	NO ₃ (N) (mg/L)
MW-1	Min	594	340	44	92	0.3
	Max	2,670	1,940	323	390	3.9
	Average	1,415	961	129	202	1.3
MW-2	Min	1,240	760	97	220	3
	Max	2,590	1,800	300	350	13
	Average	1,709	1,091	152	268	8
MW-3	Min	1,570	1,000	150	210	10
	Max	3,180	2,200	720	390	12
	Average	2,340	1,658	357	309	11
MW-4	Min	2,769	1,800	370	210	4
	Max	4,000	3,000	980	270	9
	Average	3,451	2,432	745	251	7
MW-5	Min	1,870	1,000	150	290	9
	Max	4,000	2,600	680	420	25
	Average	2348	1,526	259	344	15
MW-6	Min	1,169	760	94	170	1.7
	Max	3,076	2,000	230	320	29
	Average	1,888	1,224	155	241	19
MW-7	Min	1,846	1,200	160	200	4
	Max	2,461	1,600	420	290	11
	Average	2,070	1,367	286	234	7

Groundwater below the WWTF varies in quality, with EC ranging from 594 umhos/cm to 4,000 umhos/cm, TDS from 630 mg/L to 3,000 mg/L, chloride from 44 mg/L to 980 mg/L, sodium from 92 mg/L to 420 mg/L, nitrate as nitrogen from 0.32 mg/L to 29 mg/L.

The Discharger gets its source water from a network of eight water supply wells. The flow-weighted average source water EC (in umhos/cm) was reported as 608, 576, and 560 umhos/cm in 2007, 2008, and 2009, respectively.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan identifies the greatest long-term water quality problem facing the entire Tulare Lake Basin as increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including the following limits:

- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
- b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

The Basin Plan requires municipal WWTFs that discharge to land to comply with treatment performance standards for BOD₅ and TSS. WWTFs that preclude public access and are greater than 1 mgd must provide removal of 80 percent or reduction to 40 mg/L, whichever is more restrictive, for both BOD₅ and TSS.

Antidegradation

Constituents of concern in the discharge that have the potential to degrade groundwater include salts and nutrients. Ambient water quality in the vicinity of the WWTF is of poor quality. This Order establishes terms and conditions that ensure that the discharge will not unreasonably affect present and anticipated uses of groundwater, or, where baseline conditions are not sufficient to support the designated beneficial uses, will not degrade groundwater.

CEQA

The Lamont Public Utility District approved an expansion project for the WWTP on 13 September 2004. The expansion project included the construction of two facultative ponds, two storage ponds, a pumping station, and piping modifications to incorporate the new ponds into the existing facility. The Lamont Public Utility District acted as the lead agency for the project approval pursuant to the California Environmental Quality Act (CEQA). The Lamont Public Utility District approved a Negative Declaration for the project, and subsequently filed a Notice of Determination (SCH # 2004071025) on 21 September 2004. The Negative Declaration stated that the project would have no significant effects on the environment, provided that the proposed storage ponds were properly lined to prevent any groundwater contamination. The storage ponds were constructed with liners.

Central Valley Water Board staff reviewed the Negative Declaration and concurred with the conclusion that the pond system would not have a significant effect on the environment and on underlying groundwater quality.

This Order imposes additional regulatory requirements, including effluent limits for BOD₅, TSS, EC, and nitrogen, on a discharge that is currently ongoing. This Order does not authorize any additional construction activities. The issuance of this Order is exempt from CEQA pursuant to the categorical exemption for the existing facilities. (Cal. Code Regs., tit. 14, §15301.)

Title 27

Unless the Board finds that the discharge of designated waste is exempt from Title 27 of the California Code of Regulations, the release of designated waste is subject to full containment requirements. Here, the discharge is exempt from the requirements of Title 27 pursuant to the sewage and wastewater exemptions found at Title 27, sections 20090(a) and (b), and pursuant to the reuse exemption found at Title 27, section 20090(h).

Proposed Order Terms and Conditions

Discharge Prohibitions, Specifications and Provisions

The proposed Order prohibits the discharge of waste to surface waters and to surface water drainage courses, and prohibits the cross connection between potable water and well piping with recycled water piping.

The proposed Order restricts the Discharger to a monthly average daily flow limit of 2.0 mgd. This Order sets effluent limits for BOD₅ and TSS of 40 mg/L as monthly average and 80 mg/L as daily maximum percent removal. These limitations are based on Basin Plan minimum performance standards for municipal facilities.

The proposed Order's provisions regarding storage pond dissolved oxygen and freeboard are consistent with Central Valley Water Board policies for the prevention of nuisance conditions, and are applied to all similarly-situated facilities.

The proposed Order prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses of groundwater or contribute to the degradation natural background water quality.

The proposed Order includes provisions that require the Discharger to submit a written copy of the Title 22 Engineering Report approval letter from the Department of Public Health, and to evaluate effluent quality with respect to nitrogen species. The Order also requires the Discharger to submit a work plan to conduct a groundwater investigation to determine baseline water quality, a salinity management plan, a nutrient management plan, a technical report that addresses sludge disposal, and a provision requiring the District to install an effluent flow meter.

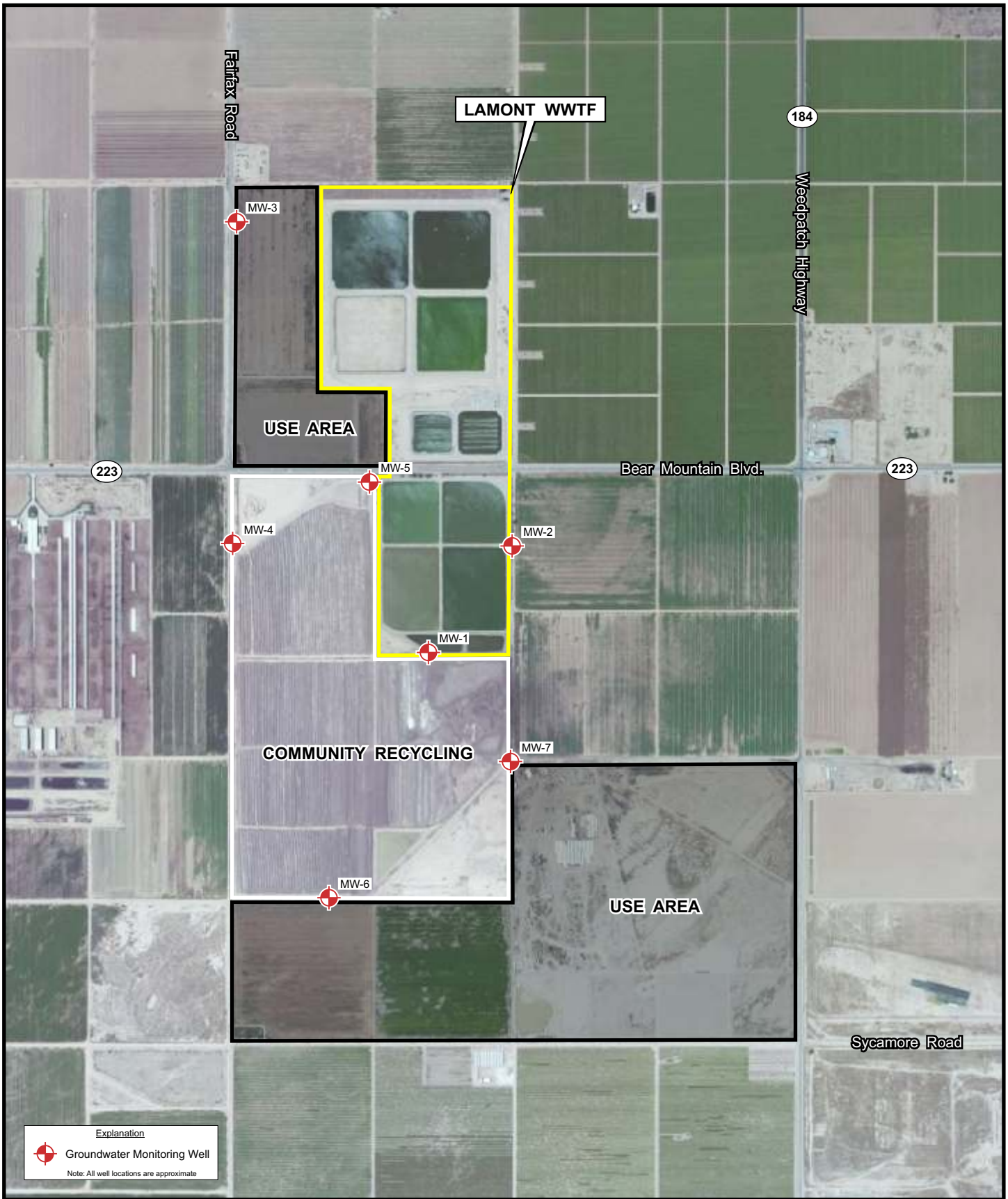
Monitoring Requirements

Section 13267 of the Water Code authorizes the Central Valley Water Board to require the Discharger to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years, there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving dischargers' accountability for meeting the conditions of discharge. Section 13268 of the Water Code authorizes assessment of administrative civil when appropriate.


The proposed Order includes influent and effluent monitoring requirements, pond monitoring, source water monitoring, sludge monitoring, Use Area monitoring, and groundwater monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent limitations prescribed by the Order, and evaluate groundwater quality and the extent of degradation, if any, caused by the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if new technical information is received or if applicable laws and regulations change.

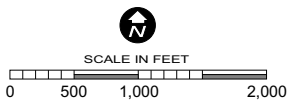


Explanation

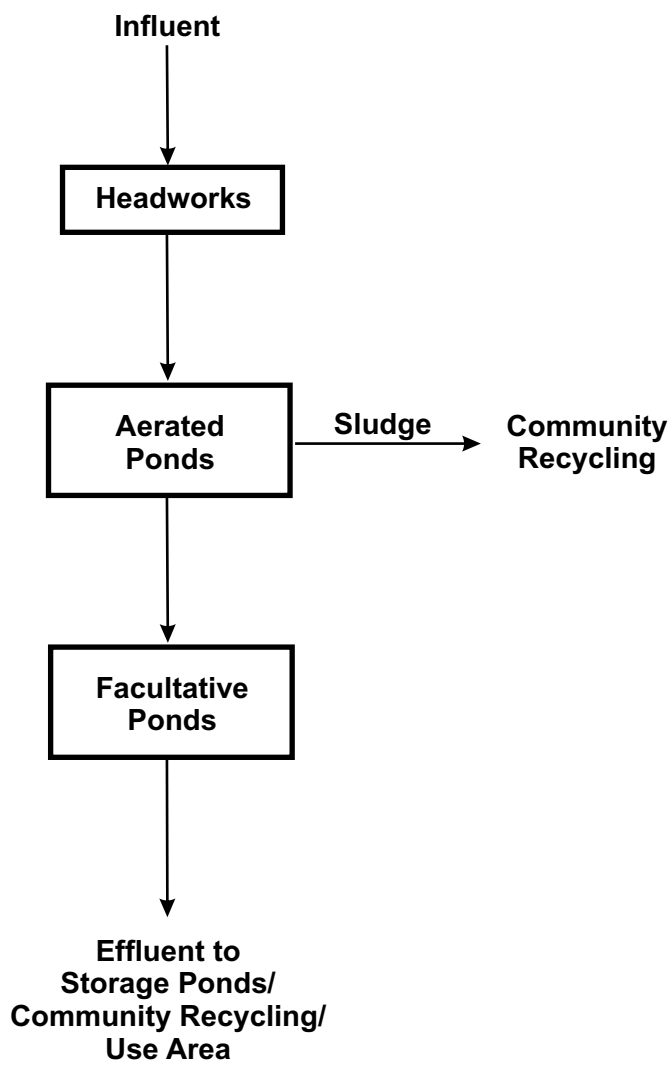
 Groundwater Monitoring Well

Note: All well locations are approximate

Map Source:
 ESRI's ArcGIS Online Premium Services
 Sections 24 & 25, T31S, R28E, MDB&M



FACILITY MAP
 WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0043
 FOR
 LAMONT PUBLIC UTILITY DISTRICT
 WASTEWATER TREATMENT FACILITY
 KERN COUNTY



NOT TO SCALE

PROCESS FLOW DIAGRAM
WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0043
FOR
LAMONT PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY

ATTACHMENT B



NONPOTABLE WATER INTERNATIONAL SYMBOL

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0043

FOR

LAMONT PUBLIC UTILITY DISTRICT

WASTEWATER TREATMENT FACILITY

KERN COUNTY