

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2016-0061

WASTE DISCHARGE REQUIREMENTS
FOR
STRATHMORE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

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

Background

1. The Strathmore Public Utility District (hereafter District or Discharger) owns and operates the wastewater treatment facility (WWTF) that provides sewerage service for the unincorporated community of Strathmore (population 3,000), which is about six miles north of Porterville in Tulare County. The WWTF occupies Assessor's Parcel Number (APN) 215-290-011-000, in the N ½ of SW ¼ Section 32, T20S, R27E, MDB&M, as shown in Attachment A, which is attached hereto and made part of the Order by reference.
2. Waste Discharge Requirements (WDRs) Order 85-024, adopted by the Central Valley Water Board on 25 January 1985, prescribes requirements for the WWTF. Order 85-024 allows a 30-day average dry weather flow of up to 0.4 million gallons per day (mgd). The purpose of this Order is to rescind the previous Order and update waste discharge requirements, in part, to ensure the discharge is consistent with water quality plans and policies, and to prescribe requirements that are effective in preserving existing and potential beneficial uses of receiving water. As it is operated today, the WWTF cannot consistently meet applicable regulatory requirements related to salinity. Further, it is unknown whether there is sufficient treatment or control measures to prevent groundwater from exceeding drinking water standards for nitrates. Therefore, this Order also requires the District to conduct an engineering evaluation of current plant performance, and to develop proposals for any upgrades necessary to bring the WWTF into compliance with all applicable regulatory requirements. This evaluation must also include consideration of options to recycle or reuse the wastewater that is currently disposed of through percolation and evaporation.
3. Central Valley Water Board staff issued Revised Monitoring and Reporting Program 85-024 on 24 August 2004.
4. The Discharger owns and operates the WWTF and collection system and is responsible for compliance with these WDRs.
5. The District reports that a 2015 median household income (MHI) study determined the MHI for District customers is \$18,650.
6. The Board issued Cleanup and abatement Order R5-2002-0730 (CAO) after the Discharger reported that pond and clarigester sludge contained toxic concentrations of copper. The CAO required the Discharger to cleanup and dispose of copper laden sludge and land application

areas, cleanup, dispose of and abate conditions of impacted soils, and characterize the horizontal and vertical extent of groundwater degradation and pollution, if any, caused by the handling of copper-laden sludge.

7. The District has partially complied with the CAO requirements by submitting required reports, removing stockpiled copper laden sludge (June 2012), characterizing copper levels in pond bottom soils, and conducting additional groundwater monitoring (Monitoring Wells have been reported as dry since 2008); remaining tasks include completing pond soil cleanup and resumption of groundwater monitoring (required by Provision F.17).
8. Cleanup and Abatement Order R5-2002-0730 will be rescinded at a future date once all requirements have been met.
9. Violations noted during recent compliance inspections included: failure to properly operate the clarigester, failure to properly maintain the evaporation/percolation ponds, and collection of effluent samples in the wrong location.

Wastewater Treatment and Disposal

10. The WWTF treats and disposes of domestic wastewater from the unincorporated community of Strathmore. The community has an estimated population of 3,000.
11. The existing WWTF was constructed in 1950 and has likely met its end of useful life. Provision F.16 requires the District to submit an engineering evaluation of the WWTF, to include a work plan to determine options for repair or upgrade to WWTF components and implementation schedule to make proposed changes.
12. The WWTF consists of a wet well with a grinder, two lift pumps, a clarigester, two oxidation ponds, six evaporation/percolation ponds, and two unlined sludge drying beds. A current site plan is included in Attachment B, which is attached hereto and made part of this Order by reference.
13. The Discharger's self-monitoring reports (SMRs) from 1 June 2011 through 30 November 2015 indicate that monthly average effluent flow is about 0.194 mgd.
14. Table 1 summarizes the results of WWTF effluent monitoring for the period January 2011 through November 2015. Effluent results below are representative of primary treatment, a 2016 inspection revealed that District Operators were taking effluent samples after the clarigester before the oxidation pond. Effluent electrical conductivity sampling was removed by the revised MRP in 2004.

Table 1. Summary of Effluent Analytical Results (2011-2015)

<u>Parameter</u>	<u>Units</u>	<u>Average</u>	<u>Range</u>
BOD	mg/L	143	65-280
Total Suspended Solids	mg/L	141	74-460
Total Copper	µg/L	212	32-640
Soluble Copper	µg/L	100	ND-100

15. The sanitary sewer system is a gravity system and consists of approximately six miles of six and eight inch pipe.
16. The sanitary sewer system collects wastewater and consists of sewer pipes, manholes, and/or other conveyance system elements that direct raw sewage to the treatment facility. A “sanitary sewer overflow” (SSO) is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered SSOs, provided that the waste is fully contained within these temporary storage/conveyance facilities.
17. SSOs consist of varying mixtures of domestic and commercial wastewater, depending on land uses in the sewage collection system. The most common causes of SSOs are grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and/or contractor-caused blockages.
18. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems General Order 2006-0003-DWQ (the General Order). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with the Order. The Discharger’s collection system exceeds one mile in length. The Discharger has been enrolled under the General Order since 9 January 2007.

Biosolids Management

19. WDRs 85-024 required that collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer.
20. Sludge from the Clarigester is discharged to two unlined drying beds, and then stockpiled onsite until there is a sufficient quantity to economically remove it.

Source Water Characteristics

21. Source water for the District is predominately treated surface water from the Friant-Kern Canal. Groundwater from a municipal supply well is used to augment the surface water supply as needed. The 2014 Consumer Confidence Report for the District reported the following concentrations (calculated as flow-weighted average for all sources):

Table 2. Strathmore PUD - Source Water Quality

<u>Parameter</u>	<u>Units</u>	<u>Average</u>	<u>Range</u>
EC	umhos/cm	230	30-620
TDS	mg/L	150	31-370
Chloride	mg/L	14.6	2.5-37
Sulfate	mg/L	14	2.2-35
Nitrate as NO ₃	mg/L	21	20-42

Site-Specific Conditions

22. The land surface in the vicinity of the WWTF is generally flat. Elevation at the WWTF is about 400 feet above mean sea level, and the area around the WWTF is relatively flat, sloping slightly to the west.
23. According to Federal Emergency Management Agency maps (Map Number 06107C1315E), the WWTF is not located within a 100-year flood plain.
24. Soils in the vicinity of the WWTF are alluvium of granitic rock sources, predominantly sandy loams and clay loams. According to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service, soils at the WWTF are comprised primarily of Exeter loam.
25. According to the Department of Water Resources (DWR) Land Use Map survey of Tulare County in 2010, the primary land uses in the vicinity of the WWTF is citrus farming, primarily oranges.
26. The Strathmore area is characterized as semi-arid with hot dry summers and cool winters. Annual precipitation in the vicinity of the WWTF averages approximately 8-12 inches, the 100-year-return-period wet year rainfall is approximately 33 inches, and the reference evapotranspiration rate is approximately 53 inches per year.

Groundwater Conditions

27. The WWTF is in the Consolidated Hydrologic Area (No. 558.10) of the South Valley Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986.
28. Regional groundwater underlying the area is first-encountered at about 310 feet above mean sea level (amsl) and flows to the west; according to the DWR Groundwater Information Center (GIC) Interactive map using data from Fall 2015.
29. The District has a current groundwater monitoring network consisting of 6 monitoring wells. Groundwater levels have dropped significantly since the District installed the wells. All installed monitoring wells have been reported as dry since 2008. Table 3 below summarizes groundwater monitoring data from 2002.

Table 3. Summary of Monitoring Well Data

<u>Parameter¹</u>	<u>CW-1</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MW-3</u>	<u>MW-4</u>	<u>DW-3</u>
Well Depth	30 ²	30 ²	30 ²	30 ²	30 ²	Ukn ³
Sample Date	12/9/2002	12/9/2002	12/9/2002	12/9/2002	12/9/2002	12/9/2002
pH	7	7.4	7.6	7.4	7.2	7.5
EC	680	1200	1200	1400	890	1100
Boron	0.2	0.4	0.2	0.3	0.2	0.2
Chloride	19	180	150	190	99	150
Magnesium	25	48	37	42	33	46
Nitrate as N	28	1.9	1.5	<0.2	5.6	4.7
Potassium	5	4	4	3	4	5
Sodium	66	120	130	160	63	77
TDS	490	780	720	840	540	640
Hardness	240	450	370	400	340	440

1. Well depth in feet below ground surface, EC in umhos/cm, pH in standard pH units. All other parameters in mg/L.

2. Depths are approximate based on Jan 2012 Groundwater Monitoring Well Installation Workplan that states, "Current groundwater levels lie below the reach of the existing monitor wells (30 feet)."

3. Unknown

30. Regional groundwater quality data can be found on the Water Quality Portal website, a cooperative service provided by the United States Geological Survey (USGS), the Environmental Protection Agency, and the National Water Quality Monitoring Council. A review of the USGS files indicates three wells are within a two mile radius of the WWTF. Table 4 below summarizes this data.

Table 4. Regional Groundwater Results

<u>Parameter¹</u>	<u>020S027E 31G003M</u>	<u>020S027E 33F001M²</u>	<u>020S027E 33H001M</u>
Well Depth	184	323	378
Sample Date	4/8/2013	11/17/2005 11/5/2008	6/19/1962
pH	6.9	7.8	8.1
Specific Conductance	844	640	612
Boron		94	-
Chloride		35.1	44
Magnesium		19.2	17
Nitrate as N		39.9	45
Potassium		3.8	3.5

Sodium	62.3	65
TDS	394	378
Hardness	180	160

1. Well depth in feet below ground surface, EC in umhos/cm, pH in standard pH units. All other parameters in mg/L.

2. Results are an average of the two sample dates

31. A January 2012 *Groundwater Monitoring Well Installation Workplan*, proposed to install deeper monitoring wells at each District-maintained well site. Provision F.17 provides a time schedule for installation of a groundwater monitoring network.

Basin Plan, Beneficial Uses, and Regulatory Considerations

32. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2015 (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to California Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
33. The WWTF lies within Detailed Analysis Unit (DAU) 242, within the Kaweah Basin Hydrologic Unit. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply and industrial process supply (IND).
34. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.
35. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.
36. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter 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.
37. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
38. 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. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

39. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 $\mu\text{mhos/cm}$. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 $\mu\text{mhos/cm}$ if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.
40. 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 a mechanism to carry salts out of the basin is established. To limit the degradation, 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 shall not exceed the EC of the source water plus 500 $\mu\text{mhos/cm}$.
 - b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 $\mu\text{mhos/cm}$, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.
41. This Order implements the maximum discharge EC limit of no more than the source water EC plus 500 $\mu\text{mhos/cm}$ as a 12-month rolling average. The 2004 Revised Monitoring and Reporting Program removed the effluent EC monitoring requirement. Monitoring and Reporting Program (MRP) R5-2016-0061 included with this Order resumes the effluent EC monitoring requirement. Provision F.16 of this Order requires the Discharger to submit a Salinity Management Plan, and includes a time schedule for implementation that will bring the Discharger into compliance with the 500 $\mu\text{mhos/cm}$ over source effluent EC limit by (10 years following Order adoption).
42. The Basin Plan requires that each RWD for a land disposal operation justify why reclamation is not practiced or proposed. This requirement has not been fulfilled because the Discharger was not asked to submit a RWD; however, the requirement is addressed by Provision F.16.

Antidegradation Analysis

43. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to the people of the state.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
 - c. 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, and

- d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.
44. Discharges from the WWTP may result in limited groundwater degradation near the disposal areas. However, limited degradation by some of the typical waste constituents associated with discharges from a municipal wastewater utility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact 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 provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.
45. Constituents of concern that have the potential to degrade groundwater include organics, nutrients, and salts. The limitations and provisions of this Order will ensure that discharges will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.
- a. The WWTP cannot consistently discharge wastewater that meets the primary nitrate MCL. However, for nutrients such as nitrate, the potential for degradation depends not only on the quality of the treated effluent, but also on the ability of the vadose zone below the effluent disposal ponds to provide an environment conducive to nitrification and denitrification, processes that convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. This Order requires the District to both resume groundwater monitoring and to conduct an analysis of the WWTP to determine if nitrogen removal will be necessary in the future to protect groundwater quality.
 - b. With respect to BOD and TSS, existing groundwater monitoring data does not indicate that discharges from the WWTP and/or percolation or evaporation areas will cause groundwater to exceed any applicable water quality objectives, including the primary and secondary MCLs.
 - c. For EC, past groundwater monitoring data indicates that groundwater has been degraded to a limited extent by the previous discharge, but that the degradation has not caused an exceedance of a water quality objective. This Order includes an effluent EC limit of source water EC plus 500 umhos/cm, a Monitoring and Reporting Program that requires groundwater monitoring for EC, and Provision F.16 requires the Discharger to submit a Salinity Management Plan, submit annual progress reports, and comply with the Effluent Limitation B.3 within 10 years following adoption of this Order.
 - d. The District discontinued groundwater monitoring in certain wells when the groundwater table fell below screened intervals. MRP R5-2016-0061 requires the Discharger to either resume monitoring of these wells, should the groundwater table rebound, or to deploy additional groundwater monitoring wells over the next few years. The additional or resumed monitoring will ensure that the groundwater beneath the WWTP and disposal areas will not be adversely impacted by organics, nutrients, or salts.
46. The Discharger provides treatment and control of the discharge that incorporates:
- a. Secondary treatment of wastewater;
 - b. An operation and maintenance manual;

- c. Certified operators to ensure proper operation and maintenance;
- d. Source water and discharge monitoring; and
- e. Groundwater monitoring.

Furthermore, this Order requires that the Discharger explore ways to recycle the wastewater that it currently discharges to the percolation ponds, and to investigate the feasibility of local recycled water projects. If it is infeasible for the Discharger to recycle its wastewater, the Discharger must either reduce effluent nitrogen concentrations or otherwise demonstrate that its disposal practices will not cause groundwater to contain concentrations of nitrate above the MCL.

47. The Board finds that the preceding treatment and control measures, combined with a robust investigation undertaken to explore potential options to recycle wastewater and/or upgrade the WWTP, represents BPTC for the discharges associated with the WWTP. This Order complies with Resolution 68-16 because the limited degradation that may occur as a result of the discharges will inhere to the maximum benefit of the people of the state, because this Order will ensure that pollution or nuisance will not occur, because this Order requires compliance with all applicable State and Regional policies, and because this Order mandates that the District employ BPTC to minimize degradation by the wastes regulated by this Order.

Other Regulatory Considerations

48. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring groundwater that receives the discharge to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
49. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2B as defined below:
- a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
 - b. Category B complexity, defined as: "Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."
50. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:
- (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 sludges 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 RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
- (2) the discharge is in compliance with the 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.

51. The discharge authorized herein (except for the discharge of residual sludge and solid waste), and the treatment and storage facilities associated with the discharge, is exempt from the requirements of Title 27 as follows:
 - a. The clarigester and oxidation ponds 1 and 2 are exempt pursuant to Title 27, section 20090(a) because they are treatment and storage facilities associated with a municipal domestic wastewater treatment plant.
 - b. Evaporation/Percolation Ponds 1, 2, 3, 4, 5, and 6 are exempt pursuant to Title 27, section 20090(b) because they are wastewater evaporation/percolation ponds and:
 - i. The Central Valley Water Board is issuing WDRs.
 - ii. The discharge is in compliance with the Basin Plan, and;
 - iii. The treated effluent discharged to the ponds does not need to be managed as hazardous waste.
52. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment facility has a design capacity of less than 1.0 mgd; therefore, the Discharger is not required to obtain coverage under NPDES General Permit CAS000001.

53. Water Code section 13267(b)(1) states:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

54. The technical reports required by this Order and the attached Monitoring and Reporting Program **R5-2016-0061** are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.
55. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.
56. All wastewater management systems at the facility have already been installed and are currently in use. This Order places additional requirements on the continued operation of the facility in order to ensure the protection of waters of the state. The issuance of this Order is therefore exempt from the provisions of CEQA in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting ... of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review.
57. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge*, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.
58. The Central Valley Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.
59. 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.

Public Notice

60. 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.
61. 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.
62. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 85-024 is rescinded and that Strathmore 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 hereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 *et seq.*, is prohibited.
3. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements.
4. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
5. The Discharger shall not allow toxic substances to be discharged into the wastewater treatment system such that biological treatment mechanisms are disrupted.

B. Effluent Limitation

1. The 12-month rolling average EC of the discharge shall not exceed the 12-month flow weighted average EC of the source water plus 500 umhos/cm. Compliance with this effluent limitation shall be determined monthly based on representative samples from location EFF-001 and is subject to the Compliance Schedule provided in Provision F.16.

C. Discharge Specifications

1. The monthly average dry weather discharge flow shall not exceed 0.4 mgd.
2. The pH of wastewater in the disposal ponds shall not be less than 6.5 or greater than 8.5.

3. 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.
4. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
5. The discharge shall remain within the permitted waste treatment/containment structures at all times.
6. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
7. 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.
8. Public contact with effluent (treatment works, evaporation/percolation ponds) shall be precluded through such means as fences, signs, or acceptable alternatives.
9. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
10. As a means of discerning compliance with Discharge Specification C.9, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive 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.
11. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. 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 in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
12. 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.
13. On or about **1 October** of each year, available pond storage capacity shall be at least equal the volume necessary to comply with Discharge Specifications C.11 and C.12.

14. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically,
 - 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.
 - e. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the April 1 to June 30 bird nesting season.
15. The Discharger shall periodically monitor sludge accumulation in the wastewater treatment/storage ponds and shall remove sludge as necessary to maintain adequate treatment and storage capacity.

D. Solids Disposal Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary or secondary 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, biosolids, and 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 disposal 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. Use and disposal of biosolids shall comply with the self-implementing federal regulations of 40 Code of Federal Regulations part 503, which are subject to enforcement by the U.S. EPA, not the Central Valley Water Board. If during the life of this Order, the State accepts primacy for implementation of part 503, the Central Valley Water Board may also initiate enforcement where appropriate.
6. 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.

E. 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) For constituents identified in Title 22, the MCLs quantified therein.
 - b. Containing Total Coliform Organisms over any 7-day period equaling or exceeding 2.2 MPN/100 mL.

F. 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 R5-2016-0061, 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 provide certified wastewater treatment plant operators in accordance with California Code of Regulations, title 23, division 3, chapter 26.
9. 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."
10. The Discharger shall maintain and operate ponds 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.
11. 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.

12. 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.
13. The Discharger shall continue to maintain coverage under, and comply with Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ and any revisions thereto as adopted by the State Water Board.
14. 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.
15. 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.
16. The Discharger shall, in accordance with the following time schedule, comply with Effluent Limitation B.1, identify and make upgrades as necessary to meet the Tulare Lake Basin Plan effluent limits for a secondary treatment plant, conduct a study to identify and implement feasible recycled water project, and ensure compliance with the groundwater limitation for nitrate.

	<u>Task</u>	<u>Compliance Date</u>
a.	Submit an engineering evaluation of the WWTF, to include a work plan to determine options for repair or upgrade to WWTF components so that the WWTF meets all Basin Plan requirements. The plan must also consider whether nitrogen reduction will be necessary in the future to protect groundwater. The work plan shall include an implementation schedule not to exceed 10 years following adoption of this Order.	1 year following Order adoption.
b.	Submit a Salinity Management Plan, with salinity source reduction goals and a proposed implementation time schedule. The plan shall identify any additional methods, if any, that could	4 years following Order adoption.

	be used to further reduce the salinity of the discharge to the maximum extent feasible (i.e., further treatment to remove constituents from wastewater that contribute to EC, use of liquid detergent at laundry facilities, community outreach), and provide a description of the tasks, cost, and time required to investigate and implement various elements of the Salinity Management Plan. The Plan shall specifically address how the Discharger will comply with WWTF Effluent Limitation B.1 for EC.	
c.	Submit a study demonstrating that the District has determined the current land uses for each parcel within a (1) mile radius of the WWTF (including District-owned parcels), identified potential uses of recycled water for each parcel, and appropriately informed land owners and formally requested their consideration of accepting WWTF effluent for a recycled water project. The study shall provide an explanation if no potential uses of recycled water are identified for a particular parcel. Notification of land owners must include pertinent effluent monitoring results and water quality goals for the recycled water uses identified.	5 years following Order adoption.
d.	If the District identifies a feasible recycled water project, submit a Report of Waste Discharge and arrange for preparation of a Title 22 Engineering Report in accordance with Title 22, section 60323, a copy of this report shall be provided to State Water Resources Control Board, Division of Drinking Water (DDW). This provision shall be considered satisfied upon submittal by the District of a complete Report of Waste Discharge and a letter from DDW determining the corresponding Title 22 Engineering Report is complete, or when the Executive Officer concludes that the Discharger has provided sufficient justification for not using effluent for recycled water.	5 years following Order adoption.
e.	If the District identifies a feasible recycled water project, submit a Nutrient Management Plan for the proposed land application area/s that receive effluent from the WWTF for Executive Officer approval. At a minimum the Plan must include procedures for monitoring the land application areas including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or nuisance conditions, a discussion on blending of wastewater and supplemental irrigation water, supporting data and calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation	5 years following Order adoption.

	water, commercial fertilizers and soil amendments are applied at agronomic rates.	
f.	If the District is unable to identify a feasible recycled water project, the District shall submit a report that demonstrates that the Discharger has reduced effluent nitrogen concentrations and/or otherwise demonstrate that disposal practices will not cause groundwater to contain concentrations of nitrate above the MCL.	6 years following Order adoption.
g.	Submit annual reports describing the Districts progress towards meeting the measure identified above.	7-10 year following Order adoption. Reports shall be submitted by 1 February of each year.
h.	Full implementation of measures identified in a., b., c., or f.	10 years following Order adoption.

17. The Discharger shall maintain a complete groundwater monitoring well network. Groundwater monitoring wells have been reported as dry since 2008. The Discharger submitted a 2012 Groundwater Monitoring Well Installation Workplan. The workplan proposes to install deeper wells at each District controlled monitoring well site. The discharger shall submit an addendum to the 2012 Groundwater Monitoring Well Installation Workplan for Executive Officer approval that proposes an additional groundwater monitoring well/s to characterize any impact that the use of unlined sludge drying beds might have on underlying groundwater.

The Discharger shall comply with the following compliance schedule in implementing the work required by this provision:

	<u>Task</u>	<u>Compliance Date</u>
a.	Submit an addendum to the 2012 Groundwater Monitoring Well Installation Workplan. The addendum shall propose the location and construction details for installation of an additional monitoring well to monitor the effect of unlined sludge drying beds on groundwater.	180 days following Order Adoption.
b.	Submit a Groundwater Monitoring Well Installation Report. The installation report shall describe well construction details for each new well, including the location, groundwater elevation, reference point elevation, geologic logs, and other details. The work proposed shall be consistent with applicable well standards described in Finding 54, and shall comply with Attachment D, Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports, attached hereto and made a part of this Order by reference.	2 years following Order Adoption or 18 months days following Executive Officer approval of the 2012 Groundwater Monitoring Well Installation Report with addendum required by Task a. above.

18. 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.
19. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort, the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations are different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
20. 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 filing 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 18 August 2016.

Original Signed by

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Vicinity Map
 - B Site Map
 - C Process Flow Diagram
 - D Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports
- Monitoring and Reporting Program R5-2016-0061
Information Sheet
Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2016-0061
FOR
STRATHMORE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE 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, electrical conductivity, and temperature) 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 9.

Monitoring Location Name	Monitoring Location Description
INF-001	Location where a representative sample of the WWTF's influent can be obtained prior to treatment processes.
EFF-001	Location where a representative sample of the WWTF's effluent can be obtained prior to discharge into the percolation ponds (overflow from the oxidation pond to the percolation ponds or if no overflow from 12" under the surface near the oxidation pond outflow point).
CW-1 and MW-1 through MW-4	Groundwater Monitoring Wells CW-1 and MW-1 through MW-4 and any other wells added to the groundwater monitoring network.
SPL-001 or SPL-002	Location where a representative sample of the District's water supply can be obtained. SPL-001 = District Supply Well; SPL-002 = Surface Water
OXI-1 and OXI-2	Location/s opposite oxidation pond inlet/s where a representative sample can be obtained from each oxidation pond
PND-001 through PND-006	Location/s opposite pond inlet/s where a representative sample can be obtained from each pond.
BIO-001	Location where a representative sample of biosolids can be obtained prior to removal to a licensed facility.

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks at INF-001. 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
Monthly	pH	pH units	Grab
Monthly	EC	umhos/cm	24-hour Composite
Monthly	Total Copper	ug/L	24-hour Composite
Monthly	Soluble Copper	ug/L	24-hour Composite
Monthly	Monthly Average Discharge Flow	mgd	Computed
Quarterly	TSS	mg/L	24-hour Composite
Quarterly	BOD ₅	mg/L	24-hour Composite

EFFLUENT MONITORING

The Discharger shall monitoring treated effluent at EFF-001 as follows. Effluent 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
Monthly	pH	pH Units	Grab
Monthly	EC	umhos/cm	Grab
Monthly	TDS	mg/L	24-hour composite
Monthly	TKN	mg/L	24-hour composite
Monthly	Nitrate (as Nitrogen)	mg/L	24-hour composite
Monthly	Ammonia Nitrate	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Monthly	Chloride	mg/L	24-hour composite
Monthly	Sodium	mg/L	24-hour composite
Monthly	Total Copper	ug/L	24-hour composite
Monthly	Soluble Copper	ug/L	24-hour Composite
Quarterly	BOD ₅	mg/L	24-hour composite
Quarterly	TSS	mg/L	24-hour composite
Annually	General Minerals	mg/L	24-hour composite

¹ Biannually monitoring shall consist of two samples per year.

² Beginning in July 2016.

POND MONITORING

Pond monitoring shall be collected at PND-1 through PND-6 and OXI-1 and OXI-2 and include at least the following:

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

¹ To the nearest tenth of a foot.

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.

While in use, the Discharger shall inspect the condition of the 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 pond surface/s 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 at locations CW-001 and MW-001 1 through MW-006 (and any new monitoring well sites). If groundwater levels rebound and previously dry wells are representative of first encountered groundwater, then only those wells shall be sampled. Groundwater shall be 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	TKN	mg/L	Grab
Quarterly	Nitrate (as Nitrogen)	mg/L	Grab
Quarterly	Ammonia Nitrate	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	General Minerals ³	mg/L	Grab
Quarterly	Total Copper	ug/L	Grab
Quarterly	Soluble Copper	ug/L	Grab
Quarterly	Total Coliform ⁴	MPN/100ml	Grab
Quarterly	Fecal Coliform ⁴	MPN/100ml	Grab

¹ To the nearest hundredth of a foot.

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

³ Groundwater monitoring well 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 (documented on the chain-of-custody form) to immediately filter then preserve the sample.

⁴ Monitoring for Total and Fecal Coliform is not required unless groundwater rebounds and samples are able to be collected from the 30-foot deep monitoring wells, or upon direction of the Executive Officer.

SOURCE WATER MONITORING

For each source (either well SPL-001 or surface water SPL-002 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	mg/L	Grab

BIOSOLIDS/SLUDGE MONITORING

Biosolids, if intended for land application, shall be collected at BIO-001 and 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 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).

The Discharger needs to demonstrate that the facility where sludge is hauled to complies with Title 40 CFR, Part 503.

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

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5D540108001, Facility Name: Strathmore PUD, Order: R5-2016-0061

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 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. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System.

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 two previous years, if available, 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.
3. Include the results of monitoring specified on pages 4 and 5.

Source Water Reporting

1. Include the results of monitoring specified on page 4.

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

Original Signed by
Ordered by: _____
PAMELA C. CREEDON, Executive Officer

18 August 2016

(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		

INFORMATION SHEET

INFORMATION SHEET – ORDER R5-2016-0061
STRATHMORE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

BACKGROUND

The Strathmore Public Utility District (PUD or District) owns and operates a wastewater treatment facility (WWTF) that produces undisinfected secondary treated wastewater. The WWTF consists of a clarigester, two oxidation ponds, six evaporation/percolation ponds, and two unlined sludge drying beds. The existing WWTF was constructed in 1950 and has likely met its end of useful life. The discharge from the WWTF is regulated by Waste Discharge Requirements Order 85-024.

In 2002 the Central Valley Water Board issued Cleanup and abatement Order R5-2002-0730 (CAO) after the Discharger reported that pond and clarigester sludge contained toxic concentrations of copper. The CAO required the Discharge to cleanup and dispose of copper laden sludge and land application areas, cleanup dispose of and abate conditions of impacted soils, and characterize the horizontal and vertical extent of groundwater degradation and pollution, if any, caused by the handling of copper laden sludge.

The District submitted required reports, removed stockpiled copper laden sludge, characterized copper levels in pond bottom soils, and conducted additional groundwater monitoring (Monitoring Wells have been reported as dry since 2008). Remaining tasks include completing pond soil cleanup and resumption of groundwater monitoring.

Wastewater

The WWTF serves a population of approximately 3,000 and three citrus packing houses. Wastewater gravity flows to the WWTF where it receives secondary treatment. The District's operators have been collecting effluent samples after the clarigester (primary treatment) but before the oxidation ponds (secondary treatment) so effluent results are representative of primary treatment and do not represent any secondary treatment provided by the oxidation pond/s. Effluent monitoring results for the period January 2011 through November 2015 are represented in the table below.

Table 1 - Summary of Effluent Analytical Results (2011-2015)

<u>Parameter</u>	<u>Units</u>	<u>Average</u>	<u>Range</u>
BOD	mg/L	143	65-280
Total Suspended Solids	mg/L	141	74-460
Total Copper	µg/L	212	32-640
Soluble Copper	µg/L	100	ND-100

Source Water

The Discharger supplies the community of Strathmore with drinking water from surface water from the Friant-Kern Canal and groundwater from one municipal supply well. The table below presents water quality data from the District's 2014 Consumer Confidence Report.

Table 2. Strathmore PUD - Source Water Quality

<u>Parameter</u>	<u>Units</u>	<u>Average</u>	<u>Range</u>
EC	umhos/cm	230	30-620
TDS	mg/L	150	31-370
Chloride	mg/L	14.6	2.5-37
Sulfate	mg/L	14	2.2-35
Nitrate as N	mg/L	21	20-42

DISPOSAL METHODS

Solids

Sludge from the Clarigester is discharged to two unlined drying beds, and then stockpiled onsite before until there is a sufficient quantity to economically remove it.

Wastewater

From the clarigester wastewater is discharged via gravity to one of two treatment/disposal trains, each consisting of an oxidation pond and three evaporation/percolation ponds. Typically only one evaporation/percolation pond is needed for wastewater disposal, which is generally the evaporation/percolation pond directly in line with whichever oxidation pond is in use. Discharge Specification C.14.e requires that vegetation management in areas in which nesting birds have been observed be carried out either before or after, but not during the April 1 to June 30 bird nesting season. Regional Water Board staff will not find the District in violation of Discharge Specification C.14.b or c for not minimizing pond weeds in accordance with Discharge Specification C.14.e during the April 1 to June 30 period if nesting birds are observed.

Groundwater Considerations

The WWTF is in the Consolidated Hydrologic Area (No. 558.10) of the South Valley Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986.

Limited published groundwater quality data from the United States Geological Survey (USGS) shows regional wells contain nitrate as nitrogen concentrations above the MCL of 10 mg/L (results range from 40-45 mg/L). The data also shows EC ranges from 612 to 844 umhos/cm. The Discharger has been monitoring groundwater quality at the site since the mid 1980's.

The original groundwater monitoring network was installed in the mid 1980's and included pairs of shallow and deep monitoring wells as well as a domestic well. A 1985 Effluent Disposal Monitoring Well System report proposed a monitoring well network consisting of pairs of deep and shallow wells. Shallow wells were to be no more than twelve feet deep and deep wells were to be approximately 30 feet deep. Monitoring reports indicate that the shallow wells have been dry since 2001 and deep wells were reported as dry in 2008. The last groundwater monitoring report submitted with groundwater elevation data was submitted in 2006, with groundwater depth for the five District controlled monitoring wells ranging from 22.35 to 26.78 feet deep.

Regional groundwater underlying the area is first-encountered at about 310 feet above mean sea level (amsl) and flows to the west; according to the DWR Groundwater Information Center (GIC) Interactive map using data from Fall 2015.

Regulatory Considerations

Basin Plan, Beneficial Uses, and Water Quality Objectives

The Water Quality Control Plan for the Tulare Lake Basin, Second Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.

The WWTF lies within Detailed Analysis Unit (DAU) 242, within the Kaweah Basin Hydrologic Unit. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply and industrial process supply (IND).

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.

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.

The Basin plan states that the evaporation of reclaimable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use of proposed use of fresh water with reclaimed water. The new Order contains a Provision requiring the District to submit a demonstration that it has determined the current land uses for each parcel within a (1) mile radius of the WWTF (including District-owned parcels), identified potential uses of recycled water for each parcel, and appropriately informed land owners and formally requested their consideration of accepting WWTF effluent for a recycled water project. The Discharger shall provide an explanation if no potential uses of recycled water are identified for a particular parcel. Notification of land owners must include pertinent effluent monitoring results and water quality goals for the recycled water uses identified. If the Discharger identifies a feasible recycled water project, the Discharger shall submit a Report of Waste Discharge and arrange for preparation of a Title 22 Engineering Report in accordance with Title 22, section 60323, and a copy of this report shall be provided to State Water Resources Control Board, Division of Drinking Water (DDW). This provision shall be considered satisfied upon submittal by the Discharger of a complete Report of Waste Discharge and a letter from DDW determining the corresponding Title 22 Engineering Report is complete, or when the Executive Officer concludes that the Discharger has provided sufficient justification for not using effluent for recycled water.

Antidegradation Analysis

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.

The Discharger has been monitoring groundwater quality at the site since 1980's. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on best groundwater quality unaffected by the discharge.

The discharge is not expected to cause significant groundwater degradation. Degradation that does occur will not violate water quality objectives. Based on this, the proposed discharge will not cause exceedances of water quality objectives nor impair beneficial uses.

This Order includes influent, effluent, and groundwater monitoring requirements to verify that the discharge does not cause violations of water quality objectives or impairment of beneficial uses. The WWTF will provide treatment and control of the discharge that incorporates: secondary treatment of wastewater; an operation and maintenance manual; certified operators to ensure proper operation and maintenance; and source water, discharge, and groundwater monitoring.

Generally, limited degradation of groundwater by some of the typical waste constituents of concern (e.g., sodium, chloride, sulfate, 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 limited groundwater degradation.

Title 27

California Code of Regulations, title 27, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

The discharge of effluent and the operation of treatment or storage facilities associated with a sewage treatment and storage facility can be allowed without requiring compliance with Title 27, provided any resulting degradation of groundwater is in accordance with the Basin Plan and the waste need not be managed as hazardous waste.

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

The Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.

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.

The proposed Order restricts the discharge to a dry weather monthly average daily flow limit of 0.4 mgd. This Order provides a 10 year time schedule for compliance with an EC limit of source water EC plus 500 umhos/cm.

The proposed Order prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses of groundwater.

The Order also includes Provisions requiring the Discharger to conduct an engineering evaluation of the WWTF to ensure the WWTF meets all Tulare Lake Basin Plan requirements for a secondary treatment facility, submit a Salinity Management Plan, pursue water recycling, and submit a revised Groundwater Monitoring Well Installation Work Plan to improve groundwater monitoring.

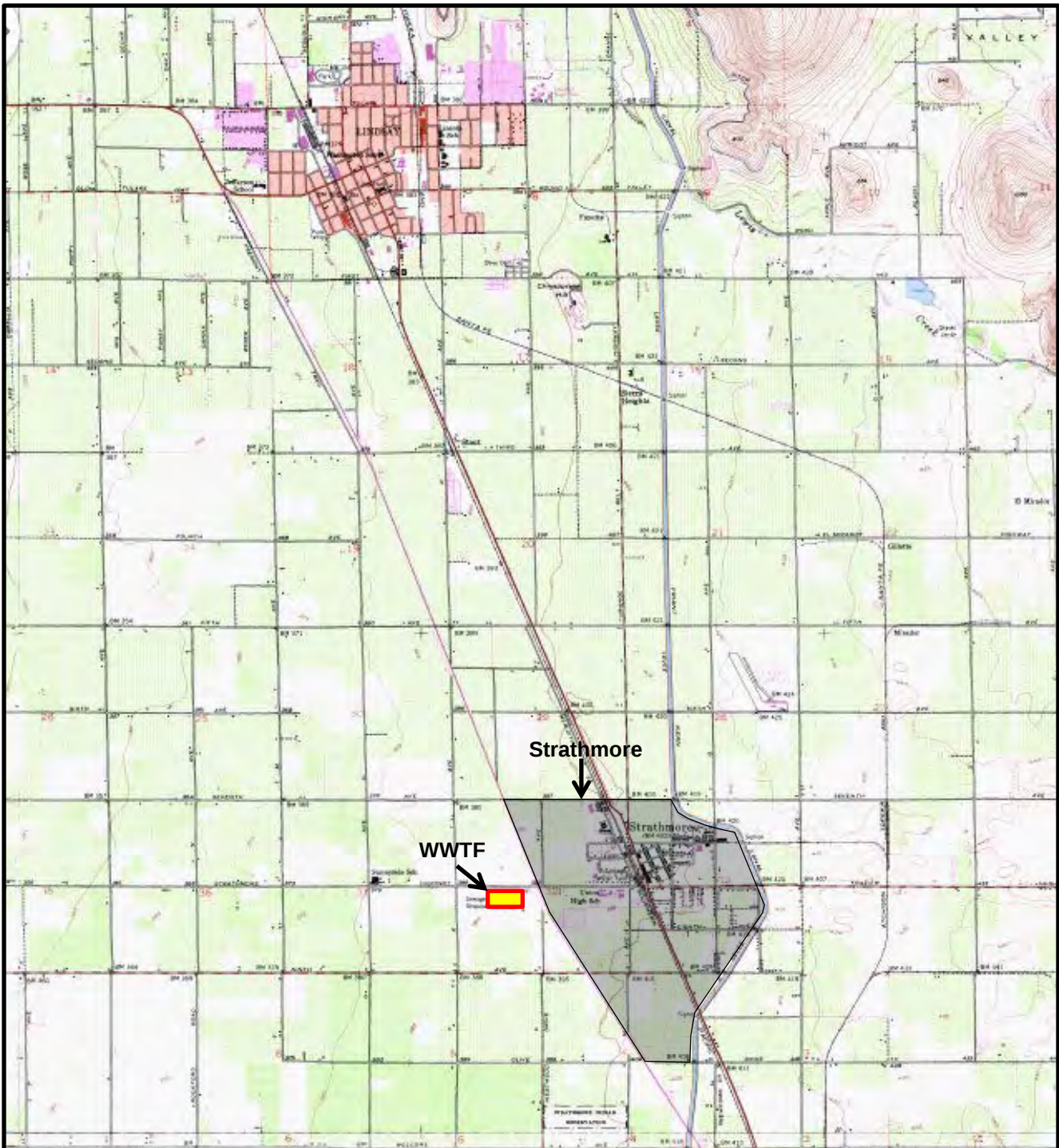
Monitoring Requirements

Section 13267 of the Water Code authorizes the Central Valley Water Board to require the District to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State.

The proposed Order includes influent and effluent monitoring requirements, pond monitoring, source water monitoring, biosolids/sludge 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.



Drawing Reference:
LINDSAY QUADRANGLE
U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLE
2014

0 0.5 1 1.5 2

Approximate Scale in Miles



VICINITY MAP
ORDER R5-2016-0061
WASTE DISCHARGE REQUIREMENTS
STRATHMORE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

ATTACHMENT A



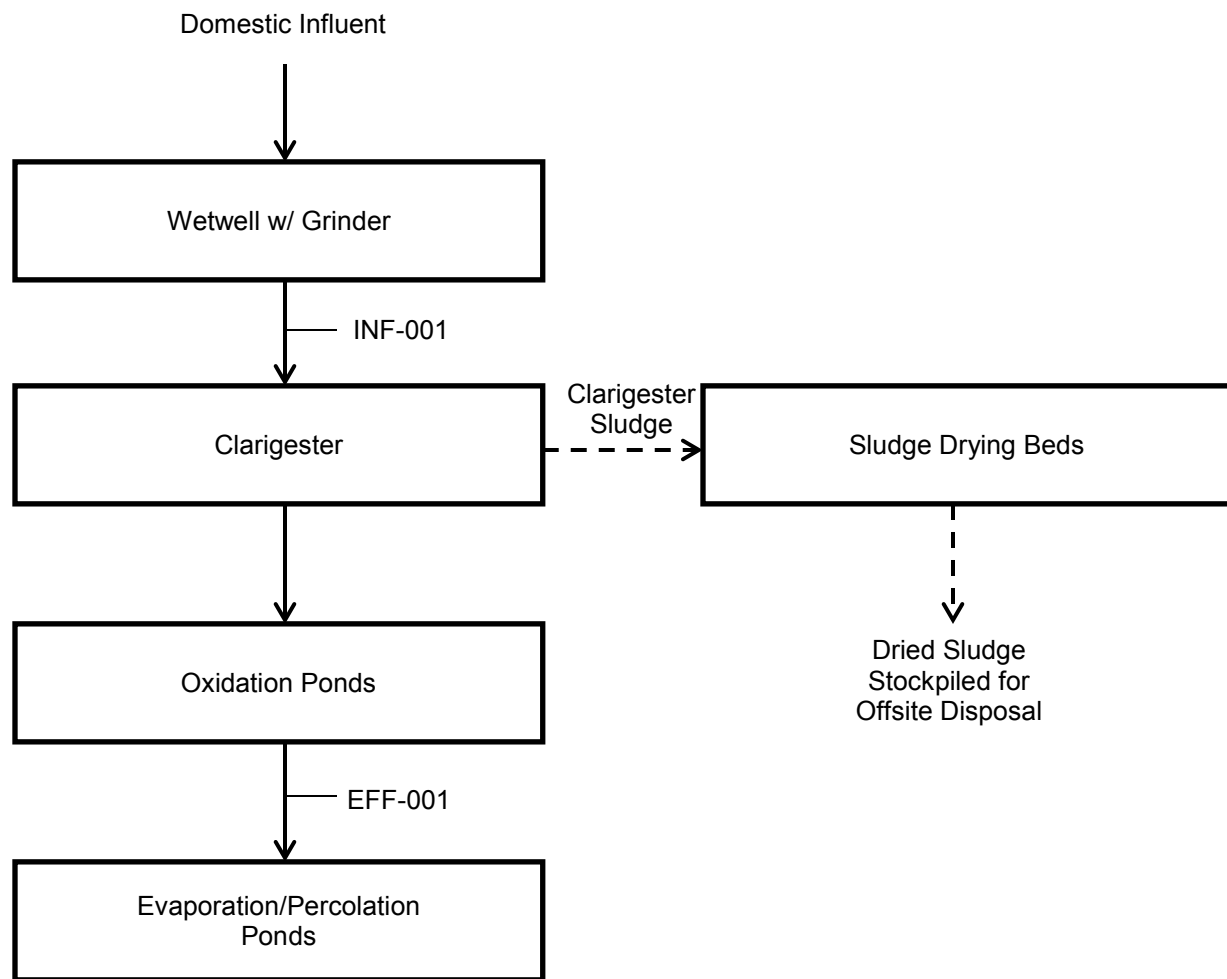
Drawing Reference:
Google Earth
Map Data: © 2016

0 100 500 1,000
Approximate Scale in Feet



SITE MAP
ORDER R5-2016-0061
WASTE DISCHARGE REQUIREMENTS
STRATHMORE PUBLIC UTILITY DISTRICT
TULARE COUNTY

ATTACHMENT B



NOT TO SCALE

<u>Symbol</u>	<u>Description</u>
	Wastewater
	Sludge
<u>Sampling Points</u>	
INF-001	Influent
EFF-001	Effluent

PROCESS FLOW DIAGRAM

ORDER R5-2016-0061
 WASTE DISCHARGE REQUIREMENTS
 FOR
 STRATHMORE PUBLIC UTILITY DISTRICT
 WASTEWATER TREATMENT FACILITY
 TULARE COUNTY

ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** *[Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.]* as soon as it or its agents

Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Waste Discharge to Land

Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.
or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

Waste Discharge to Land

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

Waste Discharge to Land

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

Waste Discharge to Land

- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

- c. The monthly average concentration is the arithmetic mean of measurements made during the month.
- d. The "daily maximum" **discharge** is the total discharge by volume during any day.

Waste Discharge to Land

- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

Waste Discharge to Land

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

Waste Discharge to Land

- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
 - (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Waste Discharge to Land

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers

**Native American Tribal Government Consultation List
Tulare County
January 13, 2015**

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Tache
Tachi
Yokut

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(559) 924-3583 Fax

Tubatulabals of Kern Valley
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Tubatulabal
(760) 379-4590
(760) 379-4592 Fax

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville , CA 93258
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Kawaiisu
Tubatulabal
Koso
Yokuts
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(661) 340-0032 Cell

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Mono
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This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Section 65352.3 and 65362.4. et seq.