CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0003

WASTE DISCHARGE REQUIREMENTS

FOR

CITY OF HUGHSON
WASTEWATER TREATMENT FACILITY
STANISLAUS COUNTY

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

1. The City of Hughson (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 8 March 2011 to apply for revised Waste Discharge Requirements (WDRs) for construction of a new wastewater treatment facility (WWTF) to serve the City of Hughson. Additional information to the RWD was received in September 2011 and October 2011.

2. WDRs Order 5-00-024 regulates the Discharger's former WWTF, which has been replaced by a new WWTF on the same site.

3. The Discharger owns and operates the WWTF and is responsible for compliance with this Order.

4. The treatment facility is located at 6700 Leedom Road, Hughson, in Section 33, T3S, R10E, MDB&M. The Assessor's Parcel Number (APN) for the WWTF is 018-064-029. The location of the facility is shown on Attachment A, which is attached hereto and made part of this Order by reference.

5. For the purposes of this Order, the term "Wastewater Treatment Facility" or "WWTF" shall mean the wastewater collection system, headworks, oxidation ditch, secondary clarifiers, rapid infiltration disposal ponds, and sludge dewatering system.

Facility Regulated Under Previous WDRs

6. The WWTF treats and disposes of domestic wastewater from residential and commercial sources in the City of Hughson and has one industrial wastewater discharger.

7. The average monthly influent flow to the WWTF from January 2008 to December 2010 was 0.83 million gallons per day (MGD) and the reported peak flow for a single day was 1.59 MGD.

8. The following table summarizes influent monitoring data from January 2008 through December 2010:

		WWTF Influent	
Parameter	Units	Average[1]	Range
EC	µmhos/cm	845	660 to 964
BOD_5 at 20˚C	mg/L	230	142 to 482

[1] Average of monitoring data from January 2008 through December 2010

9. The Discharger receives industrial wastewater from a milk processing plant owned by Dairy Farmers of America (DFA). In January 2005, the Discharger began regulating DFA under a pretreatment program, which sets effluent limits for biochemical oxygen demand, fats and grease, and salinity. To comply with the pretreatment program, DFA has implemented the following improvements:

   a. Installing a dissolved air flotation unit to reduce BOD and TSS discharged to the sewer.

   b. Replacing the water softener supplying water to the boiler with a reverse osmosis (RO) system. The RO reject water is discharged to the sewer but replacing the water softener reduced the mass of discharged salt by 200 pounds per week.

   c. Installing acid and caustic recovery systems that reduce the amount of TDS discharged to the sewer.

10. The previous wastewater treatment plant consisted of a headworks, an aeration tank, a secondary clarifier, a sludge dewatering press, and three uncovered sludge drying beds. Since 2003, the Discharger has been disinfecting the treated wastewater with sodium hypochlorite prior to disposal to nine rapid infiltration disposal ponds (Ponds 1 through 3, and Ponds 5 through 10). The facility site plan is shown on Attachment B, which is attached hereto and made part of this Order by reference.

11. The WWTF is located adjacent to the Tuolumne River (see Attachments A and B). Ponds 5 through 10 are located within the 100-year flood plain but have not been used since 2006. The headworks, treatment facility, and Ponds 1 through 3 are located on a terrace that is out of the 100-year flood plain.

12. Ponds 1 through 3 are regularly used on rotation. Typically, a pond is operated in a six-day cycle, with two days of wastewater application and four days of drying time.

13. The following table summarizes effluent monitoring data from January 2008 through December 2010.

		WWTF Effluent	
Parameter	Units	Average[1]	Range
EC	µmhos/cm	761	666 to 857
BOD_5 at 20˚C	mg/L	5.5	<2 to 30

		WWTF Effluent	
Parameter	Units	Average[1]	Range
TDS	mg/L	469	375 to 550
Nitrate (as N)	mg/L	5.5	4 to 8

[1] Average of monitoring data from January 2008 through December 2010.

Changes in the Discharge

14. The RWD describes the construction of a new wastewater treatment system, which began operating in September 2011. The newly-constructed wastewater treatment system consists of a concrete-lined oxidation ditch, two new concrete clarifiers, an indoor filter press sludge dewatering system, and two new rapid infiltration disposal ponds (Ponds 1W and 2W), which were constructed on the terrace above the 100-year flood plain (see Attachment B).

15. The previous headworks, aeration tank, secondary clarifier, and sludge dewatering press have been abandoned and destroyed. The pipeline leading to Ponds 5 through 10 has been plugged with cement so the ponds cannot be used in the future. The uncovered sludge drying beds have been left intact and will be used for backup if the indoor filter press is inoperable.

16. Treated wastewater from the new system is discharged to one of five rapid infiltration disposal ponds (Ponds 1 through 3, 1W, and 2W) throughout the year. Ponds 1W and 2W were brought online in September 2011. Based on a 20 September 2007 Geotechnical Engineering Investigation Report, the Discharger estimates that the percolation rate for the ponds is 135 feet per year.

17. The Discharger proposes increased flow limits to accommodate growth through 2025 and provided a revised water balance capacity analysis on 30 September 2011. The water balance was prepared based on reasonable estimates of influent flows, inflow and infiltration (I/I), precipitation, and evaporation. The water balance was used to model disposal capacity during the 100-year, 365-day precipitation event. The model shows that the new WWTF will provide the following capacities:

Influent Flow Measurement	Capacity
Total Annual Flow	700 MG
Average Dry Weather Daily Flow	1.8 MGD
Peak Month Average Daily Flow	2.1 MGD

18. The effluent quality of the new wastewater treatment plant is expected to remain the same quality or potentially improve in regards to biochemical oxygen demand, nitrogen, and salinity.

19. The Discharger proposes to stop disinfecting the effluent. The RWD states that previous detections of coliform organisms in the groundwater monitoring wells were a result of cross-contamination and/or inadequate sampling techniques. In addition, the RWD states that chlorine disinfection has resulted in degradation of groundwater with trihalomethanes (THMs), specifically chloroform, bromodichloromethane, and dibromochloromethane. In 2006, the Discharger disinfected the groundwater monitoring wells and implemented improved sampling techniques. As a result, the occurrences of detecting coliform organisms in the monitoring wells have decreased.

20. In 2007, dedicated bladder pumps were installed in monitoring wells MW-2 and MW-4 through MW-10 to replace the former 12-volt submersible pumps. Dedicated bladder pumps were also installed in the newly constructed monitoring wells MW-11, MW-12, and MW-13 after well development

Wastewater Collection System

21. The sewer system consists of approximately 21 miles of gravity pipe and 8 miles of force main. The Whitmore Avenue Lift Station collects flow from industrial land use areas south of Whitmore Avenue and conveys flow north in a 12-inch diameter force main that discharges to a 24-inch diameter trunk following Tully Road. An additional trunk following Tully Road carries the majority of the City's flow from commercial and residential uses. Both the trunks combine into a 36-inch diameter pipe just before entering the Hatch Road Lift Station. The Hatch Road Lift Station then conveys all the wastewater flow from the City through a force main north to the wastewater treatment plant. The flow from the force main is metered to monitor the total influent flow to the treatment plant. Both of the City's pump stations have an alarm system with an autodialer to alert operations staff of power failures and high liquid levels. Emergency generators are available to provide backup power to the lift stations when needed.

22. The sanitary sewer system consists of sewer pipes, manholes, and/or other conveyance system elements that direct raw sewage to the treatment plant. A "sanitary sewer overflow" is defined as a discharge to land or surface water from the sanitary sewer system at any point upstream of the treatment plant. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities. Sanitary sewer overflow is also defined in State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer* Systems.

23. Sanitary sewer overflows consist of varying mixtures of domestic and commercial wastewater, depending on land uses in the sewage collection system. The chief causes of sanitary sewer overflows include grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical

failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and/or contractor caused blockages.

24. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause temporary exceedance of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

25. The Discharger is expected to take all necessary steps to adequately maintain, operate, and prevent discharges from its sanitary sewer collection system and comply with State Water Board Order 2006-0003-DWQ.

Site-Specific Conditions

26. The Hughson community obtains its potable water from groundwater supply wells, which are owned and operated by the City. The 2009 City of Hughson Consumer Confidence Report provides the most recent potable water characterization. These data are summarized below and compared to effluent data.

		Water Supply		WWTF Effluent	
Parameter	Units	Detection[1]	Range	Average[2]	Range
EC	µmhos/cm	456	328 to 639	761	666 to 857
TDS	mg/L	306	220 to 420	469	375 to 550
Chloride	mg/L	15	11 to 19	– –	– –
Sodium	mg/L	64	45 to 84	– –	– –
Nitrate (as N)	mg/L	6.8	1.7 to 9.1	5.5	4 to 8
BOD_5 at 20˚C	mg/L	– –	– –	5.5	<2 to 30
TTHMs[3]	µg/L	0.6	0.5 to 0.6	– –	– –

[1] Reported detection for 2009.

[2] Average of monitoring data from January 2008 through December 2010.

[3] Total Trihalomethanes

- - not analyzed

ND – Not detected

27. The WWTF is at an elevation approximately at 125 feet mean sea level (MSL) and adjacent to the Tuolumne River. The topography is relatively flat and storm water runoff in the area drains northwest toward the Tuolumne River. The Discharger collects all storm water runoff generated at the WWTF and disposes of it in rapid infiltration Pond 4.

28. The California Department of Water Resources reports the average annual precipitation for the station closest to Hughson to be 11.2 inches and the 100 year return total to be 20.26

inches. The California Irrigation Management Information System reports the total reference evapotranspiration rate to be 50.78 inches per year for the closest station to Hughson. All portions of the WWTF are outside the 100-year flood zone.

29. Soils at the site generally consist of fine grained sand, silty sand, and clayey silt.

30. Orchards encompass the area surrounding the facility and likely have an influence on the underlying groundwater quality depending on irrigation source water (low TDS Turlock Irrigation District surface water or higher TDS groundwater) and fertilizer loading.

Groundwater Considerations

31. Groundwater underlying the site is approximately 40-60 feet below the bottom of Ponds 1 through 3, 1W, and 2W. Discharges to Ponds 1 through 3 have resulted in groundwater mounding, as indicated in groundwater elevation maps submitted by the Discharger.

32. Based on a 28 August 2006 Background Hydrogeologic Characterization Study, the flow of shallow groundwater in the vicinity of the WWTF flows northwest toward the Tuolumne River, which is typically a gaining stream.

33. Eleven groundwater monitoring wells monitor first encountered groundwater at the WWTF. The monitoring well locations are indicated on Attachment B. From south to north, the monitoring wells are located either upgradient or downgradient to the wastewater treatment plant and its individual components as follows:

    a. MW-10 is south of the entire wastewater treatment plant.

    b. MW-8 is south of the entire wastewater treatment plant and downgradient of the old wastewater treatment plant.

    c. MW-5 is directly downgradient of Ponds 1 and 2.

    d. MW-6 is directly downgradient of Pond 1.

    e. MW-4 and MW-7 are directly downgradient of Pond 3.

    f. MW-11 is further north than MW-4 and downgradient of all the disposal ponds.

    g. MW-9, MW-12, and MW-13 are downgradient of Pond 2W.

    h. MW-2 is downgradient of the wastewater treatment facility and upgradient of the Tuolumne River.

34. The following table summarizes recent groundwater monitoring data at the WWTF that were acquired prior to any discharge to Ponds 1W and 2W. The average is the mean of quarterly data values from January 2006 to January 2011, except for MW-11, MW-12, and MW-13, which were first sampled in November 2009. MW-10 was dry from October 2008 through October 2010.

MW	TDS (mg/L)		Chloride (mg/L)		Sodium (mg/L)		NO_3 as N (mg/L)		Total THMs (mg/L)		Total Coliform (MPN)	
	Avg.[1]	Range	Avg.[1]	Range	Avg.[1]	Range	Avg.[1]	Range	Avg.[1]	Range	Avg.[1]	Range
10	1180	930-1440	136	92-212	250	190-364	40.2	31-55	ND	– –	32	ND-500
2	418	230-523	81	25-110	123	65-160	0.7	ND-1	ND	– –	ND	– –
4	533	400-670	84	61-100	132	110-160	5.9	0.5-13	9.3	ND-30	12	ND-170
5	515	439-590	86	60-110	132	106-150	6.4	1.7-19	13	ND-47	2	ND-23
6	542	431-680	85	55-110	133	113-150	7.7	1.7-17	9.3	1.6-26	ND	– –
7	515	470-590	84	67-98	136	114-160	7.4	3.4-17	4.4	ND-10	122	ND-1600
8	589	500-750	81	65-97	160	130-200	8.3	1.9-16	1.8	ND-19	1	ND-2
9	389	330-470	22	5-49	58	46-78	14.8	5.2-23	0.5	ND-3.9	ND	– –
11	546	350-630	91	82-95	141	140-150	9.0	7.5-15	6	2-10	ND	– –
12	620	590-660	46	38-51	120	120-120	11.8	11-12	ND	– –	ND	– –
13	279	230-350	16	5-36	35	20-59	9.0	7.3-10	.5	ND-1	ND	– –

[1] Average of monitoring data from January 2006 through January 2011
ND – Non detect

35. Because of the distinct groundwater mound created by the ponds, the original background monitoring well MW-8 was replaced with MW-10. Monitoring well MW-10 was added to the monitoring network in December 2005. The location of MW-10 was chosen based on review of California Department of Water Resources groundwater maps, which were used to determine the historic upgradient direction of groundwater. Groundwater contour maps provided by the Discharger indicate that MW-10 may not be completely upgradient of the WWTF due to the extent of the groundwater mound. However, the monitoring data from MW-10 and its location relative to the WWTF indicate that it is representative of shallow background groundwater quality and is currently unaffected by the wastewater treatment plant discharge. Additionally, THMs have not been detected in MW-10 as they have in downgradient monitoring wells closer to the ponds. Therefore, MW-10 is considered to be representative of background groundwater quality.

36. With the exception of THMs, background groundwater quality, as indicated by MW-10, is not as good as downgradient groundwater quality closer to the ponds; therefore it appears that no degradation of groundwater quality is occurring as a result of the discharge. With the construction of the new treatment facility and the Discharger ceasing chlorination of the effluent, the THM degradation is expected to naturally attenuate.

37. In the second quarter of 2008, the groundwater elevation dropped below the screened depth of MW-10. Consequently, MW-10 was dry and could not be sampled until the first quarter of 2011, possibly due to the drought from 2007 through 2009 and/or increased groundwater use in the area. If MW-10 goes dry for an extended period, it is appropriate to require the Discharger to either replace MW-10 or justify that a replacement well is not needed. For example, a replacement well may not be needed if the water table drops

temporarily due to drought conditions rather than a sustained drop in the water table caused by an increase in groundwater use.

38. Because MW-9 and MW-12 are downgradient of an existing orchard and the data for these wells predate any discharge to Ponds 1W and 2W, the higher nitrate concentrations observed in MW-9 and MW-12 are likely caused by the influence of orchards in the immediate vicinity of the wells.

Basin Plan, Beneficial Uses, and Regulatory Considerations

39. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins,* Fourth Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section13263(a), waste discharge requirements must implement the Basin Plan.

40. The facility lies within the San Joaquin Valley Floor Unit Area No. 535.50, as depicted on interagency hydrologic maps prepared by the Department of Water Resources. Local drainage is to the Tuolumne River. The beneficial uses of the Tuolumne River, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; contact and non-contact water recreation; warm and cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

41. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, and industrial supply.

42. 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.

43. 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. 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.

44. In summary, 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. 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.

45. 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. The applicability of this objective to

groundwater designated as MUN has been affirmed by State Water Board Order WQO-2003-0014 and by subsequent decisions of the Sacramento County Superior Court and California Court of Appeal, 3rd Appellate District.

Antidegradation Analysis

46. 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.

47. Degradation of groundwater 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.

48. The Discharger has been monitoring groundwater quality at the current WWTF site since 2001. 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 existing background groundwater quality.

49. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), nutrients and coliform organisms, as discussed below:
    a. Compared to the source water TDS concentration, the effluent TDS concentration is elevated approximately 160 mg/L, which is low for a typical domestic wastewater treatment facility and indicates that the Discharger's current best practicable treatment and control practices are effective. The effluent TDS concentration currently averages 469 mg/L and the background groundwater concentration averages 1,180 mg/L. The TDS effluent quality of the newly constructed WWTF is expected to remain the same or potentially improve. Therefore, the discharge is not likely to degrade groundwater

quality due to increased salinity and a TDS effluent limit is not required to protect groundwater quality.

b. For nutrients such as nitrate, the potential for degradation depends not only on the quality of the treated effluent, but the ability of the vadose zone below the effluent disposal ponds to provide an environment conducive to nitrification and denitrification to convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The effluent nitrate (as nitrogen) concentration currently averages 5.5 mg/L and the background groundwater concentration averages 40 mg/L. The nitrate effluent quality of the newly constructed WWTF is expected to remain the same. Therefore, the discharge is not likely to degrade groundwater quality due to increased nitrate and a nitrate effluent limit is not required to protect groundwater quality.

c. For coliform organisms, the potential for exceedance of the Basin Plan's numeric water quality objective depends on the ability of vadose zone soils below the effluent storage/disposal ponds and saturated soils within the shallow water bearing zone to provide adequate filtration. Historically, total coliform organisms (TCO) detections in groundwater monitoring wells exceeded the Basin Plan limit. Waste Discharge Requirements Order 5-00-024 set an effluent limit that indirectly required disinfection. In 2003, the Discharger began disinfecting the effluent with sodium hypochlorite. As a result, trihalomethanes and an increase in TDS have been detected in the downgradient groundwater monitoring wells. In 2006, the Discharger rehabilitated and replaced groundwater monitoring wells and initiated new sampling techniques, which have reduced the TCO detections. This implies that previous TCO detections were a result of contaminated or compromised wells or poor sampling techniques. The approximate 60-foot unsaturated zone consisting of fine grained sand, silty sand, and clayey silt below Ponds 1 through 3, 1W and 2W is expected to be sufficient to filter out coliform organisms and to prevent groundwater degradation. Additionally, an analysis of surface water monitoring data from January 2006 to January 2011 upstream and downstream of the facility shows that the Tuolumne River has not been impacted by the discharge in regards to the monitored constituents (see table below). Therefore, current data indicate that a TCO effluent limit is not required to protect groundwater quality and that disinfection should not be required.

	Total Coliform (MPN)		NO_3 as N (mg/L)		TDS (mg/L)	
Location	Avg.[1]	Range	Avg.[1]	Range	Avg.[1]	Range
Upstream (S-1)	425	14 to 1600	0.43	ND to 0.95	59	20 to 110
Downstream (S-2 & S-3)	398	17 to 1600	0.44	ND to 0.94	58	25 to 110

[1] Average of monitoring data from January 2006 through January 2011

50. The Discharger provides treatment and control of the discharge that incorporates:

a. Alarms to prevent system bypass or overflow.

b. Collection system improvements to reduce the potential for SSOs and control inflow and infiltration.

c. An industrial pretreatment program that sets biochemical oxygen demand, oil and grease, and salinity effluent limits for the dairy owned by DFA.

d. Modern wastewater treatment facility that includes a concrete oxidation ditch, two concrete secondary clarifiers, and an indoor filter press sludge dewatering system.

e. A supervisory Control and Data Acquisition (SCADA) system for early detection of potential wastewater treatment disruptions.

f. Certified operators to assure proper operation and maintenance.

51. This Order establishes effluent and groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. Current groundwater monitoring data indicates that groundwater has not been degraded beyond background groundwater quality and that the discharge does not pose a threat of degradation. The requirements of this Order do not allow any degradation to occur.

Other Regulatory Considerations

52. The Discharger ceased discharging to Ponds 5 through 10 in 2006, and permanently sealed the pipeline leading to the ponds in 2011. Based on an inspection in September 2011, there is no visible evidence of sludge in Ponds 5 through 10. Therefore, this Order does not regulate Ponds 5 through 10. The Discharger may develop the land or maintain it as open space without authorization by the Central Valley Water Board.

53. 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 and the Discharger is enrolled under the General Order.

54. The State Water Board adopted Order 97-03-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 more than 1.0 MGD, but all storm water from the WWTF is collected and disposed of in rapid infiltration disposal Pond 4. The Discharger is therefore not required to obtain coverage under NPDES General Permit CAS000001.

55. 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.

56. 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.

57. The action to adopt waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301.

58. A Final Environmental Impact Report (FEIR) was certified by the City of Hughson on 13 August 2007 in accordance with the California Environmental Quality Act (CEQA)(Pub. Resources Code, § 21000 et seq.). The FEIR describes the project as the expansion, construction, and operation of the new wastewater treatment facility through the year 2025, as proposed by the Wastewater Treatment Plant Master Plan Report (Master Plan). The Master Plan included the following construction projects:

    a. Constructing new headworks, including coarse and fine screens, a Parshall flume, and biofilters for odor control.
    b. Constructing two new concrete oxidation ditches and two 70-foot diameter secondary clarifiers.
    c. Constructing indoor gravity belt filter presses for sludge dewatering.
    d. Constructing three new rapid infiltration disposal ponds.
    e. Replacing the Hatch Road influent pump station and associated force main with a new 36-inch gravity sewer extending from Hatch Road to the new influent pump station near the headworks. The gravity sewer will utilize the same route as the existing force main.
    f. Abandoning the four lower ponds (Ponds 7 through 10) and potentially converting them to storm water basins, and;
    g. Rehabilitating Ponds 5 and 6.

    The first phase of the project, which has been completed, did not include construction of the coarse screens; construction of the second concrete oxidation ditch; replacement of the Hatch Road pump station with a gravity line and new influent pump station; rehabilitation of Pond 5 and 6; or construction of the third rapid infiltration disposal pond.

59. The EIR evaluated the potential impacts to groundwater quality and found that compliance with the new WDRs will ensure that impacts to water quality would be less than significant.

60. Compliance with these waste discharge requirements will mitigate or avoid significant impacts to water quality.

61. Water Code section 13267(b) 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 discharging, or who proposes to discharge 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.

The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2012-0003 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.

62. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2-B as defined below:
    a. Category 2 threat to water quality, defined as, "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."

63. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

64. The California Code of Regulations, title 27 ("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. These exemptions, found at Title 27, section 20090, are described below:

    (a) Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludge or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

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

(1) The applicable regional water quality control board has issued WDRs, 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 … as a hazardous waste.

65. The discharge authorized herein (except for the discharge of residual sludge and solid waste), and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:

a. The oxidation ditch and clarifiers 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. Ponds 1, 2, 3, 1W, and 2W are exempt pursuant to Title 27, section 20090(b) because they are wastewater 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.

66. Although the WWTF is exempt from Title 27, the statistical data analysis methods of Title 27 are appropriate for determining whether the discharge complies with Groundwater Limitations specified in this Order.

67. 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

68. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

69. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

70. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order 5-00-024 is rescinded except for purposes of enforcement, and, pursuant to Water Code sections 13263 and 13267, the City of Hughson, 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:

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

A. Discharge Prohibitions

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

2. Bypass or overflow of untreated or partially treated waste is prohibited.

3. Discharge of wastewater to former Ponds 5 through 10 is prohibited.

4. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

5. Discharge of waste classified as "hazardous" under California Code of Regulations, title 23, section 2521, or "designated," as defined in Water Code section 13173, is prohibited.

B. Discharge Specifications

1. **Effectively immediately**, influent flows to the WWTF shall not exceed the following limits:

Influent Flow Measurement	Maximum Rate
Total Annual Flow [1]	700 MG
Average Dry Weather Flow [2]	1.8 MGD
Peak Month Average Daily Flow [3]	2.1 MGD

[1] As determined by the total flow for the calendar year.

[2] As determined by the total influent flow for the dry months August through October, inclusive, divided by 92 days and expressed in million gallons per day (MGD).

[3] As determined by the total influent wastewater flow during a calendar month, divided by the number of days in that month and expressed in million gallons per day (MGD).

2. Wastewater treatment and land application of treated wastewater shall not cause pollution or a nuisance as defined by Water Code section 13050.

3. Public contact with wastewater shall be precluded or controlled through such means as fences, signs, or acceptable alternatives.

4. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

5. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the wastewater treatment plant or the rapid infiltration disposal ponds at an intensity that creates or threatens to create nuisance conditions.

6. As a means of discerning compliance with Discharge Specification B.5, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

7. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.

8. All treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

9. All ponds shall be managed to prevent breeding of mosquitoes. In particular,
    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
    c. Dead algae, vegetation, or debris shall not accumulate on the water surface.

10. The WWTF shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, inflow, and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

11. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment levees 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 as measured vertically from the water surface to the lowest point of overflow. This requirement does not apply to the oxidation ditch and the clarifiers.

12. On or about **15 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.10 and B.11.

C. Effluent Limitations

1. Effluent discharged to the rapid infiltration ponds shall not exceed the following limits:

Constituent	Units	Monthly Average	Daily Maximum
BOD_5 [1]	mg/L	40	80

[1] 5-day biochemical oxygen demand at 20˚C.

2. No wastewater discharged to the rapid infiltration ponds shall have a pH less than 6.5 or greater than 8.4.

D. General Solids Disposal Specifications

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

1. Sludge and solid waste shall be removed from screens, sumps, and ponds as needed to ensure optimal plant operation.

2. Treatment and storage of sludge shall be confined to the treatment facility property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

3. Any storage of residual sludge, solid waste, and biosolids at the facility shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid waste discharge requirements issued by a California Water Board will satisfy this specification.

5. Use and disposal of biosolids shall comply with the self-implementing Federal regulations of 40 CFR 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 40 CFR 503, the Central Valley Water Board may also initiate enforcement where appropriate.

E. Groundwater Limitations

Release of waste constituents from any portion of the WWTF shall not cause groundwater to:

1. Contain waste constituents in concentrations statistically greater than background groundwater quality. Compliance with this limitation shall be determined annually based on comparison of background groundwater quality using historical MW-10 monitoring data and downgradient monitoring well data, using approved statistical methods.

2. Exceed a total coliform organism level of 2.2 MPN/100mL.

3. Exhibit a pH of less than 6.5 or greater than 8.4 pH units.

4. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

F. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision F.5:

    a. By **30 August 2012**, the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The plan shall describe and justify the statistical methods used to propose groundwater concentration limits for the constituents listed in the Monitoring and Reporting Program. Compliance shall be determined annually based on an interwell statistical analysis that uses methods prescribed in Title 27, section 20415(e)(10) to compare monitoring data collected at each down gradient well to background groundwater quality as measured in MW-10

2. If MW-10 becomes dry for four consecutive quarters, or is dry for a total of six quarters out of eight consecutive quarters, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan prepared in accordance with, and including the items listed in, the first section of Attachment C: “Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports.” The workplan shall describe the installation of a new background monitoring well or justify why a new well is not needed pursuant to Finding 37. The workplan shall be submitted no more than **120 days** after the end of the period specified above.

3. If MW-10 is to be rehabilitated or replaced pursuant to the approved workplan, within **120 days** of the approved workplan the Discharger shall submit a Monitoring Well Installation Report prepared in accordance with, and including the items listed in, the second section of Attachment C: “Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports.” The report shall describe the rehabilitation of MW-10, or the destruction of MW-10 and development of the new background groundwater monitoring well.

4. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain waste constituents in concentrations statistically greater than background water quality then, within **120 days** of the request of the Executive Officer, the Discharger shall submit a *Best Practical Treatment and Control (BPTC) Evaluation Report and Implementation Workplan*. The Workplan shall set forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine BPTC for waste constituents exceeding Water Quality Objectives or background concentrations. The workplan shall contain a preliminary evaluation of each component of the WWTF and effluent disposal system and provide a time schedule to complete the proposed BPTC measures that shall not exceed **five years**.

5. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

6. The Discharger shall comply with Monitoring and Reporting Program R5-2012-0003 which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

7. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

8. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with discharge limits specified in this order.

9. The Discharger shall provide certified wastewater treatment facility operators in accordance with California Code of Regulations, title 23, section 158.18(g) through section 158.28.

10. As described in the Standard Provisions, 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.

11. 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."

12. The Discharger shall comply with the requirements of the Statewide General Waste Discharge Requirements (General WDRs) for Sanitary Sewer Systems (Water Quality Order 2006-0003), the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC), and any subsequent revisions thereto. Water Quality Order 2006-0003 and Order 2008-0002-EXEC require the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.

13. The Discharger shall submit to the Central Valley Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule.

14. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger 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 name and 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 California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

15. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

16. 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.”

17. 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 Central Valley Water Board by **31 January.**

18. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

19. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

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

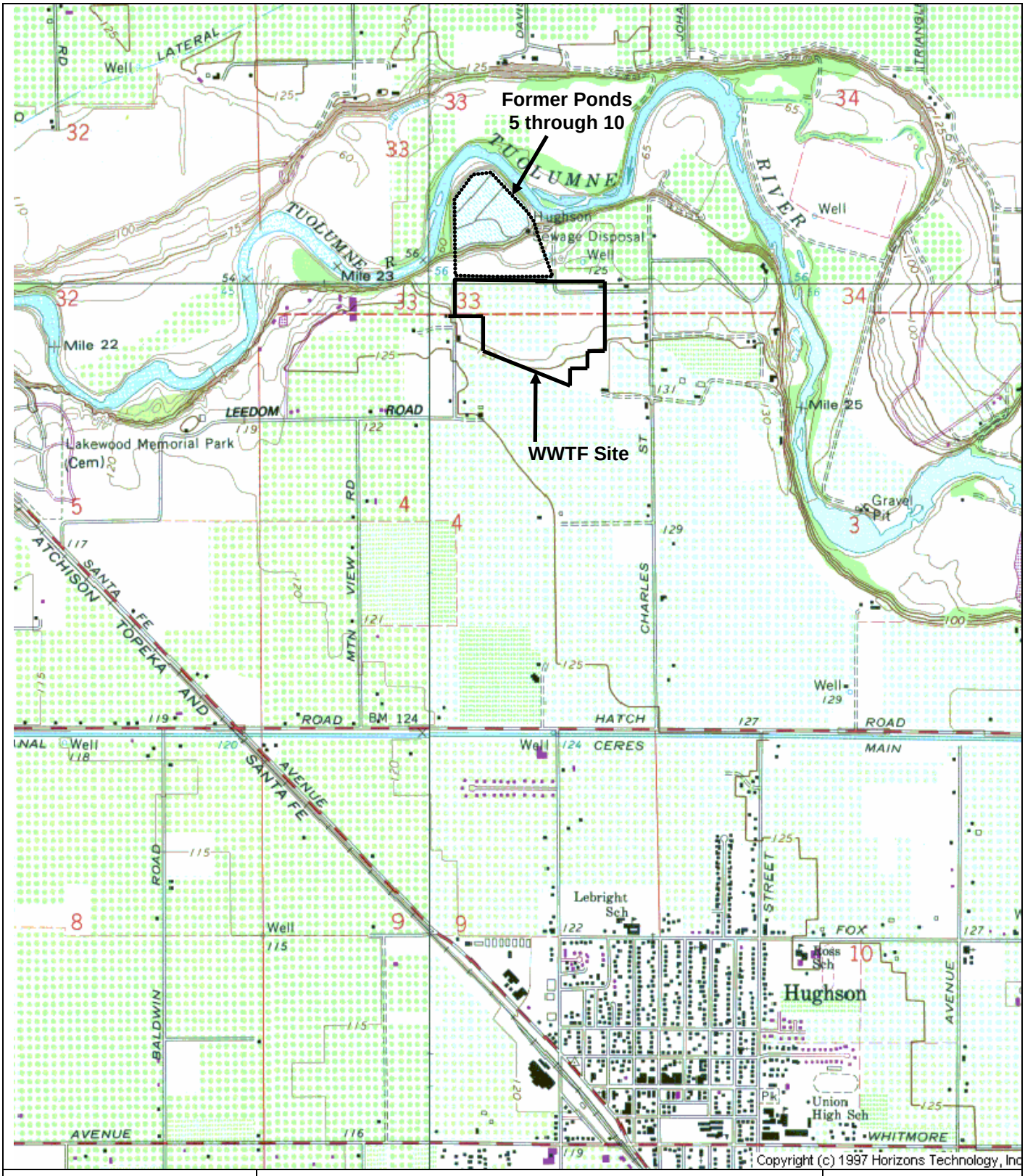
If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. 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, sections 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 Central Valley Water Quality Control Board, Central Valley Region, on 2 February 2012.

Original signed by

PAMELA C. CREEDON, Executive Officer



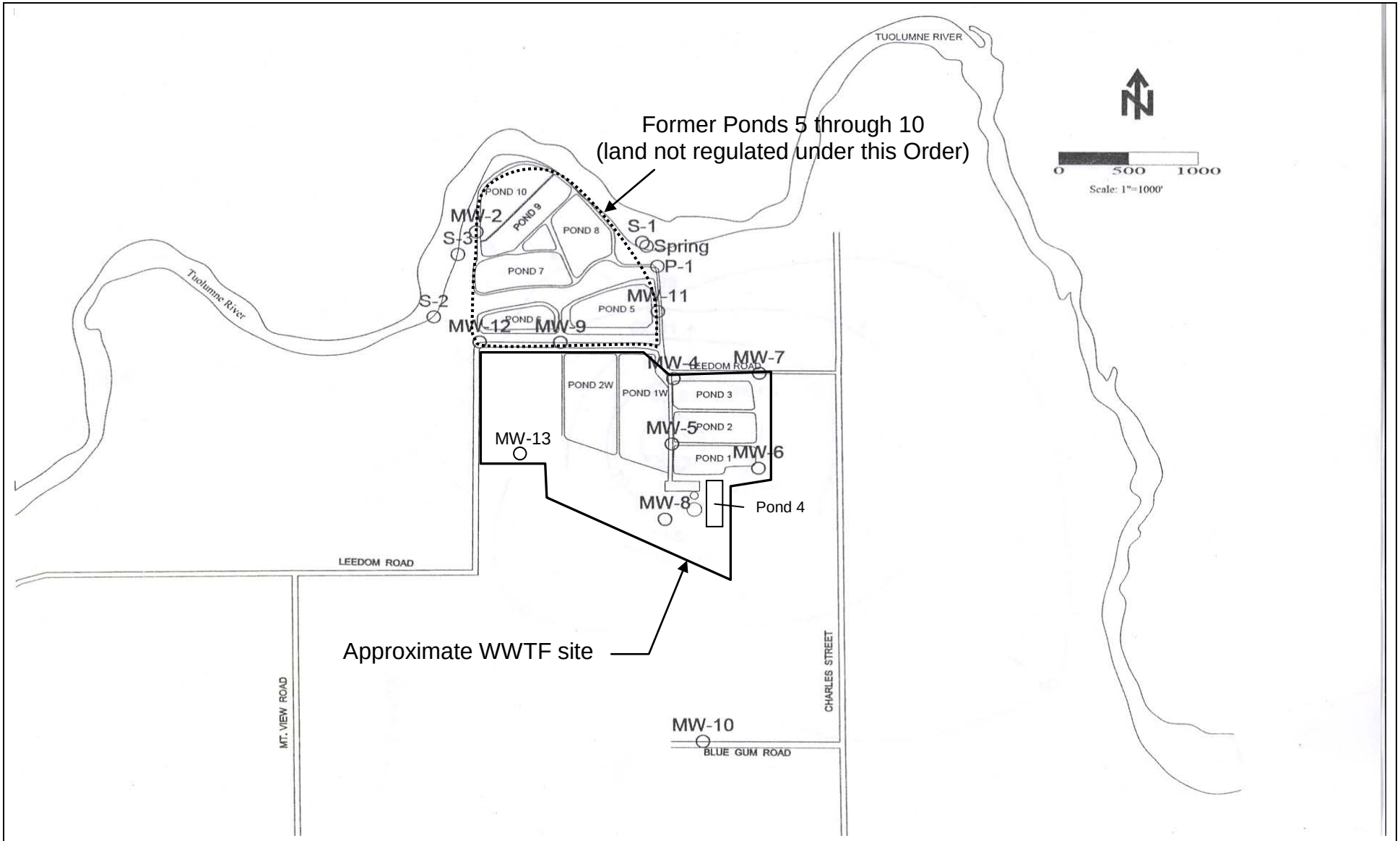
Drawing Reference:

U.S.G.S. Topographic Map
7.5 Minute Quadrangle

SITE LOCATION MAP
CITY OF HUGHSON
WASTEWATER TREATMENT PLANT
STANISLAUS COUNTY

N
W E
S

1 in. =1,760 ft.



Drawing Reference: Condor Earth Technologies, Inc.	**SITE PLAN** CITY OF HUGHSON WASTEWATER TREATMENT FACILITY	Approximate Scale 1 in. = 1,000 ft.

ATTACHMENT C

REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLANS AND MONITORING WELL INSTALLATION REPORTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1 below. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report that includes the information contained in Section 2 below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

SECTION 1 - Monitoring Well Installation Workplan and Groundwater Sampling and Analysis Plan

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:
   - Purpose of the well installation project
   - Brief description of local geologic and hydrogeologic conditions
   - Proposed monitoring well locations and rationale for well locations
   - Topographic map showing facility location, roads, and surface water bodies
   - Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:
   - On-site supervision of drilling and well installation activities
   - Description of drilling equipment and techniques
   - Equipment decontamination procedures
   - Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):
   - Diagram of proposed well construction details
   - Borehole diameter
   - Casing and screen material, diameter, and centralizer spacing (if needed)
   - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
   - Anticipated depth of well, length of well casing, and length and position of perforated interval
   - Thickness, position and composition of surface seal, sanitary seal, and sand pack
   - Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):
   - Method of development to be used (i.e., surge, bail, pump, etc.)
   - Parameters to be monitored during development and record keeping technique
   - Method of determining when development is complete
   - Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):
Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
Datum for survey measurements
List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)
The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:
- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
  - General sampling techniques
  - Record keeping during sampling (include copies of record keeping logs to be used)
  - QA/QC samples
- Chain of Custody
- Sample handling and transport

SECTION 2 - Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

A. General Information:
Purpose of the well installation project
Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells
Number of monitoring wells installed and copies of County Well Construction Permits
Topographic map showing facility location, roads, surface water bodies

Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):
On-site supervision of drilling and well installation activities
Drilling contractor and driller's name
Description of drilling equipment and techniques
Equipment decontamination procedures
Soil sampling intervals and logging methods
Well boring log
- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form):
Well construction diagram, including:
- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development:
Date(s) and method of development
How well development completion was determined
Volume of water purged from well and method of development water disposal
Field notes from well development should be included in report

F. Well Survey (survey the top rim of the well casing with the cap removed):
Identify the coordinate system and datum for survey measurements
Describe the measuring points (i.e. ground surface, top of casing, etc.)
Present the well survey report data in a table
Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0003

FOR

CITY OF HUGHSON
WASTEWATER TREATMENT FACILITY
STANISLAUS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring influent wastewater, treated effluent, disposal ponds, groundwater, sludge, and water supply. This MRP is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Central Valley Water Board staff shall approve specific sample station locations prior to implementation of sampling activities.

This MRP is effective upon date of signature. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

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

INFLUENT MONITORING

Influent flow monitoring shall be performed at the headworks. Influent samples shall be collected at the headworks. Grab samples will be considered representative of the influent. Influent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	MGD	Continuous Meter	Daily	Monthly
BOD_5[1]	mg/L	Grab	Monthly	Monthly

[1] 5-day Biochemical Oxygen Demand.

EFFLUENT MONITORING

Effluent samples shall be collected after the secondary clarifier and prior to discharge to the rapid infiltration disposal ponds. Grab samples will be considered be representative of the effluent. Effluent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
BOD_5	mg/L	Grab	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Weekly	Monthly
Nitrate (as nitrogen)	mg/L	Grab	Monthly	Monthly
Ammonia (as nitrogen)	mg/L	Grab	Monthly	Monthly
Sodium	mg/L	Grab	Quarterly	Quarterly[1]
Chloride	mg/L	Grab	Quarterly	Quarterly[1]

[1] Results shall be reported in the Monthly Monitoring Report for the month during which samples were obtained.

DISPOSAL POND MONITORING

All rapid infiltration disposal ponds shall be monitored as specified below:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
pH [1]	Standard	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm condition	--	Observation	Monthly	Monthly

[1] Samples shall be collected opposite the pond inlet.

In addition, the Discharger shall inspect the condition of the ponds once per week and document visual observations. Notations shall include observations of:

a. Presence of weeds in the water or along the berm;
b. Accumulations of dead algae, vegetation, scum, or debris on the pond surface;
c. Animal burrows in the berms; and
d. Evidence of seepage from the berms or downslope of the ponds.

GROUNDWATER MONITORING

Prior to construction of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval.

Prior to sampling, the groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following constituents with the exception of MW-2, which needs to be monitored only for depth to groundwater:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Depth to Groundwater [1]	0.01 feet	Measurement	Semiannually
Groundwater Elevation [1,2]	0.01 feet	Calculated	Semiannually

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Gradient [1]	feet/feet	Calculated	Semiannually
Gradient Direction [1]	Degrees	Calculated	Semiannually
pH	pH units	Grab	Semiannually
Total dissolved solids	mg/L	Grab	Semiannually
Chloride	mg/L	Grab	Semiannually
Nitrate (as nitrogen)	mg/L	Grab	Semiannually
Ammonia (as nitrogen)	mg/L	Grab	Semiannually
Total coliform organisms [3]	MPN/100 ml	Grab	Semiannually
Standard minerals [4]	mg/L	Grab	Annually [6]
Metals [5]	µg/L	Grab	Annually [6]

[1] Constituents required to be analyzed from MW-2

[2] Groundwater elevations shall be determined based on depth-to-water measurements using a surveyed elevation reference point on the well casing.

[3] Using a minimum of 15 tubes or three dilutions.

[4] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, bromide, calcium, fluoride, magnesium, phosphate, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness as $CaCO_3$.

[5] At a minimum, the following metals shall be included: arsenic, copper, lead, iron, manganese, nickel, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

[6] Results for constituents analyzed annually shall be reported in the fourth quarterly monitoring report each year

SURFACE WATER MONITORING

The Discharger shall monitor two sampling stations alongside the southern bank of the Tuolumne River: one approximately 100 feet upstream of abandoned Pond 5, and one approximately 100 feet downstream of abandoned Pond 6. Surface water samples shall be obtained on the same day as groundwater samples. Surface water samples shall be analyzed for the following constituents:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Total dissolved solids	mg/L	Grab	Semiannually
Nitrate nitrogen	mg/L	Grab	Semiannually
Total coliform organisms [1]	MPN/100 ml	Grab	Semiannually

[1] Using a minimum of 15 tubes or three dilutions.

WATER SUPPLY MONITORING

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

water source used during the previous year. As an alternative, the Discharger may submit results of the most current Department of Public Health Consumer Confidence Report in the Annual Monitoring Report.

Constituents	Units	Sampling and Reporting Frequency
Total Dissolved Solids	mg/L	Annually
pH	Standard units	Annually
Standard minerals	mg/L	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness

SLUDGE MONITORING

A composite sample of digested sludge shall be collected when sludge is removed from the wastewater treatment system for disposal in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and analyzed for cadmium, copper, nickel, chromium, lead, and zinc.

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

REPORTING

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

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

A. Monthly Monitoring Reports

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

1. Results of influent, effluent, and disposal pond monitoring. Data shall be presented in a tabular format.
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements.
3. Copies of inspection logs.
4. Copies of laboratory analytical report(s).
5. A calibration log verifying calibration of all hand-held monitoring instruments.

B. Semiannual Monitoring Reports

Effective immediately, the Discharger shall establish a semiannual sampling and reporting frequency, such that samples are obtained approximately every six months. Semiannual monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of the second month after the semiannual period** (i.e. the January-June semiannual report is due by August 1st). The Semiannual Monitoring Report shall include the following:

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

7. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Monitoring Report

An Annual Monitoring Report shall be submitted to the Central Valley Water Board by **1 February** each year. The Annual Monitoring Report shall include the following:

1. The results of the annual monitoring for effluent, water supply, groundwater and sludge.
2. Tabular and graphical summaries of all data collected during the year.
3. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
4. A statistical evaluation of the groundwater quality beneath the wastewater treatment facility, in accordance with the approved report submitted pursuant to Provision F.1.b.
5. A digital database (Microsoft Excel) containing historic effluent, water supply and groundwater data.
6. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and a forecast of the flows anticipated in the next year, as described in Standard Provision No. E.4
7. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
8. Summary of information on the disposal of sludge and/or solid waste. The results from any sludge monitoring required by the disposal facility.
9. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with California Code of Regulations, title 23, section 158.18(g) through section 158.28.
10. Equipment maintenance and calibration records, as described in Standard Provision No. C.4.
11. A statement of when the O&M Manual was last reviewed for adequacy and a description of any changes made during the year.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____
(Date)

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0003
CITY OF HUGHSON
STANISLAUS COUNTY

Background

The City of Hughson Wastewater Treatment Facility (WWTF) treats and disposes of domestic wastewater from residential and commercial sources from the City of Hughson, as well as one industrial wastewater discharger. The Discharger receives industrial wastewater from a milk processing facility owned by Dairy Farmers of America (DFA). In January 2005, the Discharger began regulating DFA under a pretreatment program, which sets effluent limits for biological oxygen demand (BOD), fats and grease, and salinity. To comply with the pretreatment program, DFA has implemented improvements to reduce BOD, TSS, and salinity discharged to the sewer.

Waste Discharge Requirements (WDRs) Order 5-00-0024 prescribes requirements for the WWTF and allows an average dry weather flow of 0.8 million gallons per day (MGD). The Discharger has built a new wastewater treatment plant and requested an average dry weather flow of 1.8 MGD.

The previous wastewater treatment plant consisted of a headworks, an aeration tank, a secondary clarifier, a sludge dewatering press, and three uncovered sludge drying beds. Since 2003, the Discharger has been disinfecting the treated wastewater with sodium hypochlorite prior to disposal to nine rapid infiltration disposal ponds (Ponds 1 through 3, and Ponds 5 through 10). Ponds 1 through 3 are used regularly. Ponds 5 through 10 are located within the 100-year flood plain of the Tuolumne River, but have not been used since 2006. The headworks, treatment plant, and Ponds 1 through 3 are located on a terrace that is out of the 100-year flood plain.

Modifications to the Wastewater Treatment Plant

The Discharger constructed a new wastewater treatment plant that began operating in September 2011. The new plant replaces the old plant and consists of a concrete-lined oxidation ditch, two new concrete clarifiers, an indoor filter press sludge dewatering system, and two new rapid infiltration disposal ponds (Ponds 1W and 2W). All components of the new treatment plant are constructed on the terrace above the 100-year flood plain. The previous headworks, aeration tank, secondary clarifier, and sludge dewatering press have been abandoned. The pipeline leading to Ponds 5 through 10 has been plugged with cement so the ponds cannot be used in the future. Treated wastewater from the new system is discharged to one of five rapid infiltration disposal ponds (Ponds 1 through 3, 1W, and 2W) throughout the year. The effluent quality of the new wastewater treatment plant is expected to remain the same quality or potentially improve in regards to biological oxygen demand, nitrogen, and salinity.

The Discharger proposes to stop disinfecting the effluent and states that previous detections of coliform organisms in the groundwater monitoring wells were a result of cross-contamination and/or inadequate sampling techniques. Additionally, chlorine disinfection has resulted in degradation of groundwater with trihalomethanes (THMs), specifically chloroform,

bromodichloromethane, and dibromochloromethane. In 2006, the Discharger rehabilitated and disinfected the groundwater monitoring wells and implemented improved sampling techniques. As a result, detection of coliform organisms in the monitoring wells has decreased.

Groundwater Conditions

Eleven groundwater monitoring wells monitor first-encountered groundwater at the WWTF. Shallow groundwater in the vicinity flows northwest toward the Tuolumne River, which is typically a gaining stream. Groundwater underlying the site is approximately 60 feet below the bottom of Ponds 1 through 3, 1W, and 2W. Groundwater mounding associated with discharges to Ponds 1 through 3 is apparent in groundwater elevation maps submitted by the Discharger.

Because of the distinct groundwater mound created by the ponds, the background monitoring well MW-10 is not completely upgradient of the WWTF. However, the monitoring data from MW-10 and its location relative to the WWTF indicate that it is representative of shallow background groundwater quality and is unaffected by the discharge. Additionally, THMs have not been detected in MW-10 as they have in downgradient monitoring wells closer to the disposal ponds. Therefore, MW-10 is considered to be representative of background groundwater quality. In general, background groundwater quality, as indicated by MW-10, is not as good as downgradient groundwater quality. Therefore, it appears that no degradation of groundwater quality is occurring.

In the second quarter of 2008, the groundwater elevation dropped below the screened depth of MW-10. Consequently, MW-10 was dry and could not be sampled until the first quarter of 2011, possibly due to the drought from 2007 through 2009 and/or increased groundwater use in the area. If MW-10 goes dry for an extended period, the Order requires the Discharger to either replace MW-10 or justify why replacement is not needed.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The beneficial uses of the Tuolumne River, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; contact and non-contact water recreation; warm and cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, and industrial supply. Local drainage in the area flows to the Tuolumne River, but the Discharger collects all storm water generated at the WWTP and disposes of it in rapid infiltration Pond 4.

Antidegradation Analysis

The Discharger has implemented best practicable treatment and control by constructing the new wastewater treatment plant, which incorporates: alarms to prevent system bypass or overflow; collection system improvements to reduce the potential for SSOs and to control inflow and infiltration; a concrete oxidation ditch, two concrete secondary clarifiers, and an indoor filter press sludge dewatering system; certified operators to ensure proper operation and maintenance; and a

supervisory Control and Data Acquisition (SCADA) system for early detection of potential wastewater treatment disruptions. The Discharger also has an industrial pretreatment program that sets biological oxygen demand, oil and grease, and salinity effluent limits for the dairy owned by DFA.

Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), nutrients, and coliform organisms. Compared to the source water TDS concentration, the effluent TDS concentration is elevated approximately 160 mg/L, which is low for a typical domestic wastewater treatment facility, and indicates that the Discharger's current best practicable treatment and control practices are effective. The effluent TDS concentration currently averages 469 mg/L and the background groundwater concentration averages 1,180 mg/L. The TDS effluent quality of the newly-constructed WWTF is expected to remain the same or to potentially improve. Therefore, the discharge is not likely to degrade groundwater quality due to increased salinity, and a TDS effluent limit is not required to protect groundwater quality.

For nutrients such as nitrate, the potential for unreasonable degradation depends not only on the quality of the treated effluent, but the ability of the vadose zone below the effluent disposal ponds to provide an environment conducive to nitrification and denitrification to convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The effluent nitrate (as nitrogen) concentration currently averages 5.7 mg/L and the background groundwater concentration averages 40 mg/L. The nitrate effluent quality of the newly constructed WWTF is expected to remain the same. Therefore, the discharge is not likely to degrade groundwater quality due to increased nitrate, and a nitrate effluent limit is not required to protect groundwater quality.

For coliform organisms, the potential for exceedance of the Basin Plan's numeric water quality objective depends on the ability of vadose zone soils below the effluent storage/disposal ponds and saturated soils within the shallow water bearing zone to provide adequate filtration. Historically, total coliform organisms (TCO) detections in groundwater monitoring wells exceeded the Basin Plan limit. Waste Discharge Requirements Order 5-00-024 set an effluent limit that indirectly required disinfection. In 2003, the Discharger began disinfecting the effluent with sodium hypochlorite. As a result, trihalomethanes and an increase in TDS have been detected in the downgradient groundwater monitoring wells. In 2006, the Discharger rehabilitated and replaced groundwater monitoring wells and initiated new sampling techniques, which have reduced the TCO detections. This implies that previous TCO detections were a result of contaminated or compromised wells or poor sampling techniques. The approximate 60-foot unsaturated zone consisting of fine grained sand, silty sand, and clayey silt below Ponds 1 through 3, 1W and 2W is expected to be sufficient to filter out coliform organisms and prevent groundwater degradation. Additionally, an analysis of surface water monitoring data upstream and downstream of the facility shows that the Tuolumne River has not been impacted by the discharge in regards to the monitored constituents. Therefore, current data indicate that a TCO effluent limit is not required to protect groundwater quality and disinfection is not required.

Other Regulatory Considerations

The Discharger ceased discharging to Ponds 5 through 10 in 2006, and permanently sealed the pipeline leading to the ponds in 2011. Based on an inspection in September 2011, there is no visible evidence of sludge in Ponds 5 through 10. Therefore, this Order does not regulate Ponds 5 through 10. The Discharger may develop the land or maintain it as open space without authorization by the Central Valley Water Board.

Discharge Prohibitions, Specifications and Provisions

The Discharger's water balance capacity analysis indicates the WWTF will provide the following capacities:

Influent Flow Measurement	Maximum Rate
Total Annual Flow [1]	700 MG
Average Dry Weather Flow [2]	1.8 MGD
Peak Month Average Daily Flow [3]	2.1 MGD

[1] As determined by the total flow for the calendar year.

[2] As determined by the total influent flow for the dry months August through October, inclusive, divided by 92 days and expressed in million gallons per day (MGD).

[3] As determined by the total influent wastewater flow during a calendar month, divided by the number of days in that month and expressed in million gallons per day (MGD).

Discharge of wastewater to former Ponds 5 through 10 is prohibited.

This Order contains an effluent limit for BOD and prescribes groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause groundwater to exceed a total coliform organism level of 2.2 MPN/100mL or contain waste constituents in concentrations statistically greater than background groundwater quality. Compliance with this limitation will be determined annually based on comparison of background groundwater quality using historical MW-10 monitoring data and downgradient monitoring well data, using approved statistical methods.

The Provisions require the submittal of technical reports that describe the statistical methods used to propose groundwater concentration limits based on background groundwater monitoring data. The Discharger is also required to construct a new background groundwater monitoring well if MW-10 goes dry for a certain period of time or justify why replacement is not needed.

The Monitoring and Reporting Program is designed to verify compliance with effluent limitations, groundwater limitations, and operational requirements of the WDRs.

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair

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Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

Approved
Author _____
Senior _____

13 February 2012

Thomas Clark, Director
City of Hughson Public Works Department
P.O. Box 9
Hughson, CA 95326

CERTIFIED MAIL
7010 0290 0000 8536 4445

NOTICE OF ADOPTION

OF

ORDER NO. R5-2012-0003

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF HUGHSON
WASTEWATER TREATMENT FACILITY
STANISLAUS COUNTY

Waste Discharge Requirements (WDRs) Order No. R5-2012-0003 for the City of Hughson Wastewater Treatment Facility (WWTF) was adopted by the Central Valley Water Quality Control Board on 2 February 2012.

Although the WDRs allow wastewater discharge to land, the discharge is a privilege not a right and may be revoked at any time. A copy of the Order must be maintained at the facility and must be accessible to anyone operating the wastewater system. Please note that the Provisions section of the WDRs requires submittal of certain technical reports by the dates provided in the Order. The required submittals include the items listed in the following table.

Required Reports	Due Date
Groundwater Limitations Compliance Assessment Plan	**30 August 2012**
Groundwater Monitoring Well Installation Workplan[1]	**Within 120 days of the period specified[1]**
Groundwater Monitoring Well Installation Report[2]	**Within 120 days of the approved workplan[2]**

[1]If Monitoring Well No. 10 becomes dry for four consecutive quarters, or is dry for a total of six quarters out of eight consecutive quarters.

[2] If Monitoring Well No. 10 is rehabilitated or replaced pursuant to the approved workplan.

In addition to technical reports required by the WDRs, the WDRs include a Monitoring and Reporting Program (MRP), which specifies monitoring and reporting requirements for you to

implement. Please review the MRP closely so that you may establish appropriate sampling schedules and reporting protocols. The required monitoring report submittal dates are in the table below.

Required Monitoring Report	Due Date
Monthly Monitoring Reports	**1st day of second month following the sampling (the February Report is due by 1 April)**
Semi-Annual Monitoring Reports	**1st day of second month after the semiannual period (the January – June report is due by 1 August)**
Annual Monitoring Reports	**1 February of each year**

Please be advised that the monitoring reports must be submitted on time and complete. Monitoring reports must include all of the items described in the Reporting Section of the MRP. **The first monitoring report is due on 1 April 2012 and is to cover the month of February 2012 monitoring.**

To conserve paper and reduce mailing costs, a paper copy of the Order has been sent only to the Discharger. Interested parties are advised that the full text of this Order is available at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/. Anyone without access to the Internet who needs a paper copy of the Order can obtain one by contacting Central Valley Water Board staff.

If you have any questions regarding submitting an updated report of waste discharge, or making changes to your permitted operations, please contact Mr. Robin Merod at (916) 464-4697 or rmerod@waterboards.ca.gov.

All compliance and enforcement questions should be directed to Mr. Guy Childs, with the Compliance and Enforcement Section, at (916) 464-4648 or gchilds@waterboards.ca.gov. All technical reports and monitoring reports should be submitted to Mr. Childs by the compliance due date.

ANNE OLSON, P.E.
Senior Water Resource Control Engineer
Waste Discharge to Land Permitting

Enclosures : Order No. R5-2012-0003
Standard Provisions and Reporting Requirements for Waste Discharge Requirements, 1 March 1991

cc w/o enc.: see next page

cc w/o enc: David Coupe, Office of Chief Counsel, State Water Resources Control Board, Sacramento
Gordon Innes, State Water Resources Control Board, Sacramento
Bella Bedal, Stanislaus County Environmental Health Department, Modesto
Steve Caswell, Carollo, Sacramento