

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0021  
FOR  
PLANADA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
MERCED COUNTY

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

**Background**

1. Planada Community Services District (Discharger) owns and operates a wastewater treatment facility (WWTF) in section 33, Township 7 South, Range 15 East, MDB&M, in Merced County.
2. The WWTF provides sewerage for the Community of Planada and serves a population of 4,580 according to the 2010 Census.
3. Waste Discharge Requirements (WDRs) Order R5-2011-0042 and National Pollutant Discharge Elimination System (NPDES) Permit CA0078950 regulate the discharge of 0.53 million gallons per day (mgd) of secondary disinfected wastewater to Miles Creek, a water of the United States and a tributary to the San Joaquin River.
4. On 10 June 2011, the Central Valley Water Board adopted Time Schedule Order (TSO) R5-2011-0043 that requires the Discharger to comply with final effluent limitations for carbon tetrachloride, chlorodibromomethane, cyanide, dichlorobromomethane, Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), BOD and TSS percent removal, total coliform and turbidity operational requirements of Order R5-2011-0042.
5. On 30 November 2006, the Discharger submitted a Report of Waste Discharge (RWD) proposing to cease the discharge to Miles Creek and expand the WWTF in two phases. Phase one consisted of expanding the WWTF from 0.53 mgd to 1.0 mgd and Phase two from 1.0 mgd to 1.2 mgd. Wastewater would be discharged to storage ponds and recycled to grow alfalfa. Due to delays with the California Environment Quality Act (CEQA) document the Central Valley Water Board was unable to issue WDRs.
6. On 6 December 2012, the Discharger submitted an addendum to the RWD that amends the project description of the November 2006 RWD by proposing WWTF modifications to accommodate new, lower flows. Phase one will accommodate 0.58 mgd. Phase two will accommodate 0.75 mgd. Phase one of the WWTF modifications will include

construction of two new storage ponds (combined storage capacity of 286 acre-feet), deepening of the existing stabilization ponds to convert them to aerated lagoons, and removal of the existing filtration, disinfection, and dechlorination equipment. The Discharger's engineer has indicated that the aerated lagoons will be lined to the same specifications as the proposed storage ponds. The proposed storage ponds will be lined with one foot of remolded and compacted clay. The permeability will be about  $4.8 \times 10^{-7}$  cm/sec. The storage ponds constructed in Phase one will provide enough storage capacity to accommodate 0.75 mgd. The Discharger has purchased 110 acres on which it will recycle its effluent on alfalfa (Use Area). The acreage is in section 33 of Township 7 South, Range 15 East and section 4, Township 8 South, Range 15 East, MDB&M, and is owned by the Discharger. Phase one will also include construction of an irrigation pump station sized to irrigate the 110 acres. The District will need to expand the Use Area to 135 acres to accommodate a flow of 0.75 mgd. Phase two will include expansion of the Use Area and the irrigation pump station to irrigate the additional acreage.

7. The Discharger has not submitted a Title 22 Engineering Report to the Department of Public Health (DPH) for the recycling of secondary undisinfectated wastewater to the proposed 110 acres.

### **Wastewater Treatment and Disposal**

8. Currently the WWTF consist of a headworks, three silt-clay lined aerated lagoons, three unlined stabilization ponds, six unlined intermittent sand filters, six pressure filter pods, and chlorination and dechlorination units. A site map of the WWTF is shown on [Attachment A](#), and a flow schematic of the proposed WWTF is shown on [Attachment B](#), both of which are a part of this Order.
9. On 14 January 2013, AM Consulting Engineers, on behalf of the Discharger, submitted a water balance based on a 100-year wet year. The water balance assumes 110 acres of Use Area for recycling of 0.58 mgd (Phase one) and 135 acres of Use Area for recycling of 0.75 mgd (Phase two). The water balance shows that the WWTF will need to have a storage capacity of approximately 217 acre-feet to accommodate the proposed flow of 0.58 mgd and 286 acre-feet to accommodate a flow of 0.75 mgd. Storage ponds one and two will have storage capacity of 161 acre-feet and 125 acre-feet, respectively, and a total combined storage capacity of 286 acre-feet.
10. The WWTF ponds do not produce large amounts of sludge/biosolids. In 1998, the Discharger removed sludge/biosolids from its ponds and applied it to land as soil amendment. The Discharger has not had to remove sludge/biosolids since. According to the RWD, screenings removed at the headworks will be deposited into a bin where soda ash will be added to control odors. The screenings will be hauled to a properly permitted landfill. The RWD also indicates that the Discharger will dry any sludge/biosolids removed from the ponds prior to hauling it off-site. The RWD does not

describe specific sludge/biosolids drying, storage, and disposal practices (e.g., where it will be hauled). A provision requiring the Discharger to submit a technical report describing its specific solids and sludge/biosolids handling and disposal practices is included in this Order.

### Wastewater Characteristics

11. The Discharger's self-monitoring reports (SMRs) from January 2009 through November 2012 indicate that the monthly average discharge flow ranges from 0.18 mgd to 0.5 mgd.
12. Annual average wastewater influent quality for BOD, TSS, and pH based on data contained in the Discharger's SMRs from January 2009 through November 2012, as required by Order R5-2011-0042, are tabulated in Table 1.

Table 1. Influent Quality

	BOD mg/L	TSS mg/L	pH pH Units
2009	221	121	7.98
2010	276	283	7.81
2011	254	380	7.67
2012	263	294	7.39

13. Annual average wastewater effluent characteristics for constituents of concern, based on data contained in the Discharger's SMRs from January 2009 through November 2012, are tabulated in Table 2.

Table 2. Effluent Quality

	EC umhos/cm	TDS mg/L	NO <sub>3</sub> (N) mg/L	TN mg/L	BOD mg/L	TSS mg/L	pH pH Units
2009	686	490	1.88	5.19	17.42	13.71	7.45
2010	574	388	3.22	5.43	18.44	15.88	7.55
2011	604	385	2.08	4.76	16.73	15.31	7.51
2012	620	406	2.52	6.61	14.73	14.27	7.54

14. BOD and TN loading rates as calculated by Central Valley Water Board staff are 0.84 lbs/acre/day and 137.23 lbs/acre/yr, respectively, based on the 2012 annual average BOD of 14.73 mg/L, TN of 6.61 mg/L, and the proposed maximum flow of 0.75 mgd.
15. On 16 February 2012, AM Consulting Engineers, on behalf of the Discharger, submitted *Salinity Evaluation and Minimization Plan* (Salinity Plan), as required

by Special Provision C.3.a of Order R5-2011-0042 and NPDES Permit CA0078950. According to the Salinity Plan, wastewater to the Discharger's WWTF is entirely domestic. The only industrial discharger (Merced Milling Co) ceased discharging into the Discharger's sewer system in 2011. Salinity reduction methods proposed by the Discharger include discontinuing the use of disinfection and dechlorination chemicals in the treatment process and annual public outreach activities. The Salinity Plan does not describe specific public outreach activities and/or methods that will be implemented by the Discharger. A provision requiring the Discharger to submit a Salinity Plan addendum describing in detail the public outreach activities and/or methods that will be implemented along with annual reporting of these is included in this Order.

### **Source Water Characteristics**

16. The Discharger has six water supply wells (SPL-001, and SPL-003 through SPL-007). Supply well SPL-001 has elevated nitrate concentrations and is used as a standby well. Source water is obtained from SPL-003 through SPL-007. The flow-weighted average source water EC was reported as 368 umhos/cm in 2011.

### **Wastewater Collection System**

17. The Discharger's collection system is comprised of about 11 miles of gravity sewer lines and two lift stations. The main lift station is located on Gerard Avenue and Plainsburg Road. The second lift station is located in the northern part of the Community of Planada on Plainsburg Road.
18. On 2 May 2006, the State Water Resources Control Board (hereafter State Water Board) adopted a General Sanitary Sewer System Order (State Water Resources Control Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*) (the "General Order"). The General Order requires that all public agencies that own or operate sanitary sewers systems greater than one mile in length comply with the General Order. The Discharger's collection system is greater than one mile in length. The Discharger has applied for, and is covered by, the General Order.

### **Site-Specific Conditions**

19. Land uses in the vicinity of the WWTF are primarily agricultural. The primary crops grown in the area are prunes, figs, tomatoes and almonds, according to the Merced County 2002 Land Use Map published by the Department of Water Resources (DWR).
20. The WWTF and Use Area are in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through April. Average annual pan evaporation in the discharge area is about 67 inches, according to DWR

Bulletin No. 113-3. The average annual precipitation in the discharge area is about 12 inches based on 113 years of data collected by the Western Regional Climate Center.

21. Soils in the vicinity of the WWTF are predominately Porterville Clays, followed by Marguerite Silty Clay Loams, according to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service. Both Porterville Clay and Marguerite Silty Clay Loam have a land capacity classification of 2s. Soils with "Class 2" classification have moderate limitations that restrict the choice of plants or that require moderate conservation practices. The subclass "s" indicates these soils have limitations within the root zone, such as shallowness of the root zone, a high content of stones, a low available water capacity, low fertility, or excessive salinity.
22. According to the Federal Emergency Management Agency maps (Map Number 06047C0465G) the WWTF is in Zone AO, a river or stream flood hazard area. This area has a one percent or greater chance of shallow flooding each year, usually in the form of sheet flow. A portion of the proposed Use Area is in Zone A, an area with a one percent annual chance of flooding.
23. The WWTF was constructed above the 100 year flood plain. The proposed new storage ponds will be built above ground with levees higher than the treatment ponds according to the Discharger's engineer.
24. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System General Industrial Storm Water Permit for the discharge because all storm water runoff is retained onsite and does not discharge to a water of the United States.

### **Groundwater Considerations**

25. Groundwater in the area of the WWTF is found at approximately 25 feet below ground surface (bgs) and flows to the southwest direction, according to the November 2006 RWD.
26. The existing WWTF has a groundwater monitoring well network consisting of three monitoring wells (MW-1 through MW-3), as shown on Attachment A. The monitoring wells were installed in 2006. Monitoring well MW-1 is upgradient well, has a total depth of 60 feet, and is screened 30 to 60 feet bgs. Monitoring wells MW-2 and MW-3 are downgradient wells, both have a total depth of 70 feet, and are screened 30 to 60 feet bgs.
27. Based on boring logs provided in the May 2007 Monitoring Well Installation Report submitted by Boyle Engineering Corporation on behalf of the Discharger, the soil profile documented during well installation consisted of silty sand from zero to 40 feet bgs,

coarse sand and gravel from 40 to 44 feet bgs, and gray-brown clay from 44 to 70 feet bgs.

28. The First Quarter 2008 Groundwater Monitoring Report for the Grayson Property (a leaking underground tank cleanup site about a mile north of the WWTF) describes the area as gradually sloped floor of the San Joaquin Valley. The geologic composition of the area is characterized as alluvium deposits overlaying the Lone, Valley Springs, and Mehrten formations that rest directly upon metamorphic and igneous rocks of the bedrock complex.
29. Based on groundwater data in January 2009 through November 2012 SMRs, annual average groundwater characteristics for constituents of concern are tabulated in Table 3.

Table 3. Groundwater Quality

		MW-1 Upgradient	MW-2 Downgradient	MW-3 Downgradient
EC (umhos/cm)	2009	706	365	589
	2010	622	262	746
	2011	651	282	782
	2012	592	430	768
TDS (mg/L)	2009	428	240	402
	2010	399	177	477
	2011	425	173	467
	2012	434	284	479
Na (mg/L)	2009	20	18	25
	2010	20	13	44
	2011	19	14	44
	2012	19	26	55
Cl (mg/L)	2009	6	9	13
	2010	8	3	42
	2011	14	2	41
	2012	14	20	41
NO <sub>3</sub> (N) (mg/L)	2009	4	2	2
	2010	3	2	3
	2011	5	1	2
	2012	3	3	6

30. Groundwater in the vicinity of the WWTF is of good quality with respect to salinity and nitrates.

31. Construction of the two storage ponds will require the relocation of MW-2. The Discharger has proposed to relocate MW-2 and install two new downgradient wells. This Order includes provisions requiring the Discharger to submit a Work Plan for the installation of the proposed monitoring wells and a Well Installation Report once well construction is complete.

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

32. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised October 2011* (the "Basin Plan") designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Board. In accordance with Water Code section 13263(a), these waste discharge requirements implement the Basin Plan.
33. The WWTF is in the Merced Hydrologic Area (No. 535.80) of the San Joaquin Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board. Local drainage is to Miles Creek. The Basin Plan does not specifically identify beneficial uses for Miles Creek, but does identify present and potential uses for the San Joaquin River between Sack Dam and the mouth of the Merced River to which Miles Creek, via Owens Creek, is tributary. The beneficial uses, as stated in the Basin Plan, are: municipal and domestic supply; agricultural supply, including irrigation and stock watering; industrial process supply; water contact recreation, including canoeing and rafting; non-contact water recreation; warm freshwater habitat; migration of aquatic organisms, warm and cold; spawning, reproduction, and/or early development, warm and cold; wildlife habitat; and shellfish harvesting.
34. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, industrial service and industrial process supply.
35. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
36. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires

a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

### **Antidegradation Analysis**

37. State Water Board Resolution No. 68-16 (*Policy with Respect to Maintaining High Quality Water of the State*) (the “Antidegradation Policy”) prohibits degradation of groundwater unless it has been shown that:
  - a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and
  - d. The degradation is consistent with the maximum benefit to the people of the state.
38. The discharge is not expected to cause significant groundwater degradation. Degradation that does occur will not violate water quality objectives. Effluent quality meets the most stringent water quality objectives for protection of salt-sensitive plants and is of similar quality as groundwater. Further, the Discharger is proposing to line the storage ponds and aerated lagoons with native clay soils that have a permeability of  $4.8 \times 10^{-7}$  cm/sec. Based on this, the proposed discharge will not cause exceedences of water quality objectives nor impair beneficial uses.
39. This Order includes extensive influent, effluent, and groundwater monitoring requirements to verify that the discharge does not cause violations of water quality objectives or impairment of beneficial uses.
40. The WWTF described in Findings 8, 9, and 10, will provide treatment and control of the discharge that incorporates:
  - a. Secondary treatment of wastewater;
  - b. Recycling of wastewater for crop irrigation;
  - c. An operation and maintenance manual;
  - d. Lined treatment and storage ponds to limit the amount of wastewater that percolates to groundwater;



- e. Certified operators to ensure proper operation and maintenance; and
- f. Source water, discharge, and groundwater monitoring.

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

41. Generally, limited degradation of groundwater by some of the typical waste constituents of concern (e.g., EC and nitrate) released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the state. The technology, energy, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the state, and therefore provides sufficient reason to accommodate planned growth and allow for limited groundwater degradation.

### **Water Recycling Regulatory Considerations**

42. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organisms as indicator organisms. DPH has primary statewide responsibility for protecting public health, and has established statewide criteria in Title 22 of the California Code of Regulations ("Title 22") for the use of recycled water.
43. A 1996 Memorandum of Agreement (MOA) between DPH and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the regional water boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California. This Order implements the applicable portions of the Title 22 water recycling regulation in accordance with the MOA.
44. Section 60304 of Title 22 states that recycled wastewater used for the surface irrigation of the following shall be at least undisinfected secondary recycled water:
- a. Orchards where the recycled water does not come into contact with the edible portion of the crop,
  - b. Vineyards where the recycled water does not come into contact with the edible portion of the crop,

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

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

48. Title 22, section 60323, requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards. The Discharger has not submitted a Title 22 Engineering Report to DPH. A provision requiring the Discharger to submit a Title 22 Engineering Report to DPH and a written copy of the letter from DPH approving the Title 22 Engineering Report prior to the application of recycled water is included in this Order.

### **CEQA**

49. Planada Community Services District adopted an Environmental Impact Report (EIR) (SCH #2006041048) for the proposed expansion of their WWTF from 0.58 mgd to 0.75 mgd. The proposed expansion consists of constructing two clay-lined storage ponds and reclaiming wastewater on approximately 135 net acres of Use Area. To mitigate potential impacts to water quality, the CEQA document includes mitigation measures such as relocating MW-2 and the proposal to construct two additional downgradient wells. Planada Community Services District filed a Notice of Determination on 2 February 2012.
50. Central Valley Water Board staff reviewed the Final EIR and concurs that the project will not have a significant impact on water quality. This Order implements and provides monitoring of the mitigation measures that fall within the jurisdiction of the Central Valley Water Board.

### **Other Regulatory Considerations**

51. Based on the threat and complexity of the discharge, the WWTF is determined to be classified as 2B as defined below:
- a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
  - b. Category B complexity: "Any discharger not included in 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."
52. California Code of Regulations, title 27 ("Title 27") contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt wastewater discharges. The exemption, found at Title 27, section 20090, is described below:

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

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

53. The discharge authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:

- a. The Central Valley Water Board is issuing WDRs.
- b. The discharge is in compliance with the Basin Plan, and;
- c. The treated effluent discharged to the Use Area does not need to be managed as hazardous waste.

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 less than 1.0 mgd; therefore, the Discharger is not required to obtain coverage under NPDES General Permit CAS000001.

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

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

56. The technical reports required by this Order and monitoring reports required by the attached MRP R5-2013-0021 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the wastewater treatment facility that discharges the waste subject to this Order.

57. DWR set standards for the construction and destruction of groundwater wells, as described in California Well Standards Bulletin 74-90 (June 1991). These standards,

and any more stringent standards adopted by the State or county pursuant to Water Code section 13801, apply to all monitoring wells.

58. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 Code of Federal Regulations part 503, Standards for the Use or Disposal of Sewage Sludge, which establish management criteria for protection of ground and surface waters, sets limits and application rates for heavy metals, and establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA.
59. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

### **Public Notice**

60. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the conditions of discharge of this Order.
61. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
62. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that pursuant to Water Code sections 13263 and 13267, Planada Community Services District, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

#### **A. Discharge Prohibitions**

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in California Code of Regulations, title 23, section 2521(a), is prohibited. Discharge of waste classified as 'designated', as defined in Water Code section 13173 is prohibited.

4. Discharge of wastewater in a manner or location other than that described herein or in the RWD is prohibited.

**B. Effluent Limitations [Compliance shall be determined at EFF-001]**

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

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

<sup>1</sup> Five-day biochemical oxygen demand

<sup>2</sup> Total suspended solids

3. The arithmetic mean of BOD<sub>5</sub> and TSS in effluent samples collected over a monthly period shall not exceed 20 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (80 percent removal).

**C. Discharge Specifications**

1. The monthly average dry weather discharge flow shall not exceed 0.58 mgd until the requirements of [Provision G.20](#) are satisfied, after which it shall not exceed 0.75 mgd. **[Compliance shall be determined at EFF-001]**
2. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of Groundwater Limitations of this Order.
3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
4. The discharge shall remain within the permitted waste treatment/containment structures and Use Areas at all times.
5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
6. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

7. Public contact with effluent (treatment works, percolation ponds) shall be precluded through such means as fences, signs, or acceptable alternatives.
8. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
9. The treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
10. On or about **1 October** of each year, available pond storage capacity shall be at least equal the volume necessary to comply with Discharge Specification C.9.
11. All ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.
  - c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
  - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
12. The Discharger shall periodically monitor sludge/biosolids accumulation in the wastewater treatment/storage ponds and shall remove sludge/biosolids as necessary to maintain adequate treatment and storage capacity.

#### **D. Water Recycling Specifications**

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

1. For the purpose of this Order, "Use Area" means an area with defined boundaries where recycled water is used or discharged.

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



- a. There shall be no standing water 48 hours after irrigation ceases;
- b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
- c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

14. Use Areas and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:

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

- 15. A public water supply shall not be used as backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of California Code of Regulations, title 17, sections 7602(a) and 7603(a).
- 16. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting recycled water and those transporting domestic supply, and the domestic supply pipeline shall be located above the recycled water pipeline.
- 17. Any backflow prevention device installed to protect a public water system shall be inspected and maintained in accordance with Title 17, section 7605.
- 18. All reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All reclamation distribution system piping shall be purple or adequately wrapped with purple tape.
- 19. Recycled water controller, valves, and similar appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles, locking mechanisms, or some other means to prevent public access or tampering. The contents of the signs shall conform to Title 22, section 60310. Quick couplers and

sprinkler heads, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibs that the public could use shall be eliminated.

20. Public contact with recycled water shall be controlled using signs and/or other appropriate means. Signs of a size no less than four inches high by eight inches wide with proper wording (shown below) shall be placed at all areas of public access and around the perimeter of all areas used for effluent disposal or conveyance to alert the public of the use of recycled water. All signs shall display an international symbol similar to that show in [Attachment C](#), which is attached hereto and a part of this Order, and present the following wording:

**“RECYCLED WATER – DO NOT DRINK”**

**“AGUA DE DESPERDICIO RECLAMADA – POR FAVOR NO TOME”**

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

#### **E. Solids and Sludge/Biosolids Disposal Specifications**

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advance wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers

to sludge that has been treated and tested and shown to be capable of being beneficially used as soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations.

1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc., as needed to ensure optimal plant operation.
2. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
3. Residual sludge, solid waste, and biosolids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, and soil amendment sites) operated in accordance with valid waste discharge requirements will satisfy this specification.
4. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board or a local (e.g., county) program authorized by a regional water board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-DWQ, "General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities"). For a biosolids use project to be authorized by the General Biosolids Order, the Discharger must file a complete Notice of Applicability for each project.
5. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

## **F. Groundwater Limitations**

1. Release of waste constituents from any treatment, reclamation or storage component associated with the discharge shall not cause or contribute to groundwater:
  - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:
    - (i) Nitrate (as N) of 10 mg/L.
    - (ii) For constituents identified in Title 22, the MCLs quantified therein.

- b. Containing Total Coliform Organisms over any 7-day period equaling or exceeding 2.2 MPN/100 mL.

## **G. Provisions**

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions), which are part of this Order.
2. The Discharger shall comply with MRP R5-2013-0021, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
4. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
5. The Discharger shall not allow pollutant-free wastewater to be discharged into the WWTF collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
7. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of

back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.

8. The Discharger shall provide certified wastewater treatment plant operators in accordance with California Code of Regulations, title 23, division 3, chapter 26.
9. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
10. As a means of discerning compliance with [Discharge Specification C.8](#), the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
11. The Discharger shall maintain and operate ponds sufficiently to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain a permanent marker with calibration that indicates the water level at the design capacity and enables determination of available operational freeboard.
12. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.
13. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.

14. The Discharger shall continue to maintain coverage under, and comply with Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ and any revisions thereto as adopted by the State Water Board.
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. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
17. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
18. **By 8 October 2013**, the Discharger shall submit a Title 22 Engineering Report in accordance with Title 22, section 60323. A copy of this report shall be provided to DPH. This provision shall be considered satisfied upon submittal by the Discharger of a letter from DPH determining the report is complete.
19. **By 11 April 2014**, the Discharger shall submit a technical report containing final design details and demonstration that the clay-lined storage ponds were constructed as described in the RWD and the aerated lagoons (former stabilization ponds) were also constructed to have a permeability of  $4.8 \times 10^{-7}$  cm/sec. Alternatively, the Discharger may submit for Executive Officer approval an alternate liner design for Executive Officer approval. The alternative design shall include design specifications, a demonstration that the liner will be as protective of water quality as the design described in the RWD, proposed Quality Assurance and Quality Control procedures, and a proposed time schedule for completion.

20. The monthly average dry weather discharge flow shall not exceed 0.58 mgd until the Discharger submits a technical report in the form of an engineering report and certification that demonstrates the WWTF can reliably treat and dispose of the WWTF effluent up to a monthly average dry weather flow of 0.75 mgd. The report shall include all information that the Executive Officer deems necessary. Following written approval by the Executive Officer, the monthly average dry weather flow shall not exceed 0.75 mgd.
21. **By 8 October 2013**, the Discharger shall submit a Salinity Management Plan Addendum for Executive Officer approval. The addendum shall describe the various public outreach activities and/or methods the Discharger will implement as part of its salinity reduction measures and provide for reporting of these on an annual basis to the Central Valley Water Board.
22. **By 8 October 2013**, the Discharger shall submit a Nutrient Management Plan for the Use Areas for Executive Officer approval. The Nutrient Management plan shall describe the TDS and nutrient loading rates to the Use Area(s). The objective of the Nutrient Management Plan shall be to identify and utilize site specific data to demonstrate that wastewater loading will occur at reasonable agronomic rates without causing or contributing to groundwater degradation exceeding that authorized in this Order's Groundwater Limitations or otherwise causing exceedances of water quality objectives. The Plan must address all sources of salt and nutrients that may be applied to the Use Area, including but not limited to, wastewater, commercial fertilizers, other soil amendments, etc.
23. **By 9 August 2013**, the Discharger shall submit a Work Plan for the installation of the downgradient monitoring wells (MW-2, MW-4, and MW-5). The Work Plan shall satisfy the information needs specified in the monitoring well installation section of Attachment D, *Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports*. All wells shall comply with appropriate standards as described in *California Well Standard Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981), and any more stringent standards adopted by the Discharger or County pursuant to Water Code 13801.
24. **By 8 October 2013**, the Discharger shall complete well installation and commence groundwater monitoring in accordance with the Work Plan submitted pursuant to Provision G.23 and Monitoring and Reporting Program R5-2013-0021.
25. **By 7 November 2013**, the Discharger shall submit a monitoring well installation report that meets the requirements of Attachment D.
26. The Discharger shall maintain a complete groundwater monitoring well network. If monitoring well(s) go dry, the Discharger shall replace the monitoring well(s). The

new well(s) shall be constructed in a similar manner as the existing monitoring well(s). Upon installation of the monitoring well(s), the Discharger shall submit a Groundwater Monitoring Well Installation Report. The installation report shall describe well construction details for each new well, including the location, groundwater elevation, reference point elevation, geologic logs, and other details.

27. **By 8 August 2013**, the Discharger shall submit a Solids Management Plan that describes proposed solids and sludge/biosolids handling practices and how compliance with the Solids Disposal Specifications and monitoring requirements of this Order will be achieved.
28. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for potential constituents.
29. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plant for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations are different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
30. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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

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



[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/)

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 11 April 2013.

*Original signed by:*

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PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Site Location Map
  - B Flow Schematic
  - C Recycled Water Signage
  - D Standard Requirements for Monitoring Well Installation  
Work Plans and Monitoring Well Installation Reports
- Monitoring and Reporting Program R5-2013-0021  
Information Sheet  
Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2013-0021  
FOR  
PLANADA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
MERCED COUNTY

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

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

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

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

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

A glossary of terms used within this MRP is included on [page 11](#) and a list of the constituents required for the monitoring of Priority Pollutants is included in Table 1, which is on [page 12](#).

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
INF-001	Location where a representative sample of the Facility's influent can be obtained prior to any additives, treatment processes, and plant return flow.
EFF-001	Location where a representative sample of the Facility's effluent can be obtained prior to discharge into the storage ponds.
PND-001 through PND-008	Aerated Lagoons No. 1-6, and Storage Ponds No. 1-2
MW-1 through MW-5	Groundwater Monitoring Wells MW-1 through MW-5
SPL-003 through SPL-007	Water Supply Wells SPL-003 through SPL-007
SLD-001	Location where a representative sample of the Facility's sludge/biosolids can be obtained after removal from the ponds.
EFF-002	Location where the Facility's effluent flow can be measured after the storage ponds and prior to discharge to the Use Area.

### INFLUENT MONITORING

The Discharger shall monitor the influent to the WWTF at INF-001 as follows:

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

### EFFLUENT MONITORING

The Discharger shall monitor treated effluent at EFF-001 as follows.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab

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

<sup>1</sup> Biannually monitoring shall consist of two samples per year.

<sup>2</sup> Beginning in July 2013.

<sup>3</sup> mg/L or ug/L, as appropriate.

### POND MONITORING

Permanent markers (e.g., staff gages) shall be placed in all storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard. Pond monitoring at PND-001 through PND-008 shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	DO <sup>1</sup>	mg/L	Grab <sup>2</sup>
Weekly	Freeboard	Feet <sup>3</sup>	Observation
Weekly	Odors	---	Observation
Weekly	Berm Condition	---	Observation

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

<sup>2</sup> DO shall be measured between 8:00 a.m. and 10:00 a.m. and shall be taken opposite the pond inlet at a depth of approximately one-foot.

<sup>3</sup> To the nearest tenth of a foot.

The Discharger shall inspect the condition of the storage ponds weekly and record visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether grease, dead algae, vegetation, scum, or debris are accumulating on the storage pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark

green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

### GROUNDWATER MONITORING

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of standing water within the well casing and screen, or additionally the filter pack pore volume. Groundwater monitoring wells MW-1 through MW-5<sup>1</sup> shall be sampled and analyzed for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Depth to groundwater	Feet <sup>2</sup>	Measured
Quarterly	Groundwater Elevation	Feet <sup>3</sup>	Calculated
Quarterly	pH	pH units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	TDS	mg/L	Grab
Quarterly	TKN	mg/L	Grab
Quarterly	Nitrate (as Nitrogen)	mg/L	Grab
Quarterly	Ammonia Nitrate	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	General Minerals <sup>4</sup>	mg/L	Grab

<sup>1</sup> Upon construction of the new monitoring wells MW-2, MW-4, and MW-5 the Discharger shall also begin groundwater monitoring of these wells in accordance with this Monitoring and Reporting Program. The Discharger shall submit electronic self-monitoring reports.

<sup>2</sup> To the nearest tenth of a foot.

<sup>3</sup> To the nearest tenth of a foot above mean Sea Level

<sup>4</sup> With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24-hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

### SOURCE WATER MONITORING

The Discharger shall monitor each water supply well, SPL-003 through SPL-007. For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements. Alternatively, the Discharger may establish representative sampling stations within the distribution system serving the same area as is served by the WWTF.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Flow-Weighted EC	umhos/cm	Computed Average

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

**SLUDGE/BIOSOLIDS MONITORING**

The Discharger shall monitor sludge/biosolids at SLD-001 for the following:

Arsenic	Copper	Nickel
Cadmium	Lead	Selenium
Molybdenum	Mercury	Zinc

Monitoring shall be conducted: using the methods in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846) and updates thereto, as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4).

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogens reduction levels by one of the methods listed in 40 CFR, Part 503.32. The Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b). The Discharger needs to demonstrate that the facility where sludge is hauled to complies with Title 40 CFR, Part 503.

**USE AREA MONITORING**

The Discharger shall monitor effluent applied to the Use Area at EFF-002. The Discharger must also perform the routine monitoring and loading calculations for each discrete irrigation area within the Use Area. Data shall be collected and presented in tabular format in accordance with Table 2.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter

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

## REPORTING

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

First Quarter Monitoring Report:	<b>1 May</b>
Second Quarter Monitoring Report:	<b>1 August</b>
Third Quarter Monitoring Report:	<b>1 November</b>
Fourth Quarter Monitoring Report:	<b>1 February</b>

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

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

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

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

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

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

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be

signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

The Discharger shall continue to submit electronic self-monitoring reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site (<http://ciwqs.waterboards.ca.gov/>). The Discharger shall maintain sufficient staffing and resources to ensure it submits eSMRs during the effective duration of this Order. This includes provision of training and supervision of individuals (e.g., Discharger personnel or consultant) on how to prepare and submit eSMRs. The CIWQS web site will provide additional directions for eSMR submittal in the event there will be service interruption.

The Discharger shall submit eSMRs in accordance with the following requirements:

1. When CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data as an attachment under the Attachments tab.
2. The Discharger shall attach all laboratory analysis sheets, including quality assurance/quality control information, with all its eSMRs for which sample analyses were performed.
3. The Discharger shall attach or enter a cover letter with each eSMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation. Violations must also be entered into the CIWQS web site under the Violations tab for the reporting period in which the violation occurred.
4. SMRs must be submitted to the Central Valley Water Board, signed and certified as required by the Standard Provisions, through the CIWQS web site.

**A. All Quarterly Monitoring Reports** shall include the following:

#### **Wastewater Reporting**

1. The results of Influent, Effluent, and Pond Monitoring specified on [page 2 and 3](#).



2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.
3. For each of the quarters, calculation of the 12-month rolling average EC of the discharge using the EC value for that month averaged with EC values for the previous 11 months.
4. For each month of the quarter, calculation of the monthly average effluent BOD<sub>5</sub> and TSS concentrations, and calculation of the percent removal of BOD<sub>5</sub> and TSS compared to the influent.
5. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

### **Groundwater Reporting**

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

### **Source Water Reporting**

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

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

### **Wastewater Treatment Facility Information**

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.

2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A statement whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. The results of an annual evaluation conducted pursuant to Standard Provision E.4 and a figure depicting monthly average discharge flow for the previous five calendar years.
6. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

### **Source Water Reporting**

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

### **Sludge/Biosolids Monitoring**

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

3. Include the results of monitoring specified on page 5.

**Use Area Reporting**

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

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

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

11 April 2012

(Date)



**Table 1. Priority Pollutant Scan**

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

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

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

**Table 2. Use Area Monitoring**

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

## INFORMATION SHEET

INFORMATION SHEET-ORDER R5-2013-0021  
PLANADA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
MERCED COUNTY

### **Background**

Waste Discharge Requirements (WDRs) Order R5- 2011-0042 and National Pollutant Discharge Elimination System (NPDES) Permit CA0078950 regulate the Planada Community Services District (District) wastewater treatment facility (WWTF). Order R5-2011-0042 authorizes a discharge of 0.53 million gallons per day (mgd) of wastewater to Miles Creek, a water of the United States and eventual tributary to the San Joaquin River.

The District was unable to consistently comply with final effluent limitations in Order R5-2011-0042, and the Central Valley Water Board adopted Time Schedule Order (TSO) R5-2011-0043 to bring the District into compliance. To comply with the TSO, the District chose to eliminate its surface water discharge and instead recycle its wastewater on fiber, fodder, and seed crops.

In November 2006, the District submitted a Report of Waste Discharge (RWD) for the land discharge and for a proposed expansion of the WWTF. However, due to delays with the CEQA document (see CEQA section below for further details), the Central Valley Water Board was unable to issue WDRs. The final outcome of the CEQA process (discussed in more detail below) resulted in the proposal of a smaller discharge flow increase than that originally proposed in the November 2006 RWD. Central Valley Water Board staff required the District to submit a RWD addendum to address changes to the proposed project. In December 2012, the District submitted a RWD addendum to amend the proposed project expansion.

The existing WWTF consists of a headworks, three silt-clay lined aerated lagoons, three lined stabilization ponds, six unlined intermittent san filters, six pressure filter pods, chlorination, and dechlorination.

The December 2012 RWD proposes to increase flows from 0.53 mgd to 0.58 mgd in Phase one and from 0.58 mgd to 0.75 mgd in Phase two. The District will construct two new storage ponds and deepen the existing stabilization ponds. The storage ponds and aerated lagoons will be lined with compacted clay. Phase one will include the construction of an irrigation pump station sized to irrigate 110 acres of Use Area and accommodate flows of 0.58 mgd. Phase two will include the expansion of the Use Area to 135 acres and the construction of an irrigation pump station to accommodate flows of 0.75 mgd. up to a capacity of 1,000 gallons per minute. The District also purchased 110 acres of land for recycling.

### **Groundwater Conditions**

Groundwater in the vicinity of the WWTF is found at approximately 40 ft below ground surface and flows in the southwest direction.

The existing WWTF has a groundwater monitoring well network consisting of three monitoring wells (MW-1 through MW-3). The monitoring wells were installed in 2006. Monitoring well MW-1 is an upgradient well, has a total depth of 60 feet, and is screened from 30 to 60 feet bgs. Monitoring wells MW-2 and MW-3 are downgradient wells; both have a total depth of 70 feet, and are screened from 30 to 60 feet bgs.

Based on boring logs provided in the May 2007 Monitoring Well Installation Report submitted by Boyle Engineering Corporation on behalf of the District, the soil profile consists of silty sand from zero to 40 feet bgs, coarse sand and gravel from 40 to 44 feet bgs, and gray-brown clay from 44 to 70 feet bgs.

The First Quarter 2008 Groundwater Monitoring Report for the Grayson Property, a leaking underground tank cleanup site (about a mile north of the WWTF), describes the area as gradually sloped floor of the San Joaquin Valley. The geologic composition of the area is characterized as alluvium deposits overlaying the lone, Valley Springs, and Mehrten formations that rest directly upon metamorphic and igneous rocks of the bedrock complex.

There are three groundwater monitoring wells (MW-1 through MW-3) at the WWTF. Groundwater data for these monitoring wells is tabulated below.



		MW-1 Upgradient	MW-2 Downgradient	MW-3 Downgradient
EC (umhos/cm)	2009	706	365	589
	2010	622	262	746
	2011	651	282	782
	2012	592	430	768
TDS (mg/L)	2009	428	240	402
	2010	399	177	477
	2011	425	173	467
	2012	434	284	479
Na (mg/L)	2009	20	18	25
	2010	20	13	44
	2011	19	14	44
	2012	19	26	55
Cl (mg/L)	2009	6	9	13
	2010	8	3	42
	2011	14	2	41
	2012	14	20	41
NO <sub>3</sub> (N) (mg/L)	2009	4	2	2
	2010	3	2	3
	2011	5	1	2
	2012	3	3	6

Groundwater in the vicinity of the WWTF is of good quality with respect to salinity and nitrates.

According to Figure 2-1 of the December 2012 RWD the proposed storage ponds will be located near MW-2. The District has proposed to relocate MW-2 to the southwest corner of Storage Pond No.1 (as shown in Figure 2-1) and install two additional downgradient wells MW-4 (north of Owens Creek/Dibblee Lateral) and MW-5 (south of Owens Creek/Dibblee Lateral). This Order includes requirements for the Discharger to submit a Work Plan for the installation of the proposed monitoring wells and a Well Installation Report once the wells are constructed.

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

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised October 2011* (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. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service and industrial process.

### **Antidegradation**

Available effluent data indicates that the discharge will not significantly degrade groundwater. Effluent quality meets the most stringent water quality objectives and is of similar quality as groundwater. Further, the District is proposing to line its storage ponds and aerated lagoons (former stabilization ponds) with native clay soils that will be recompacted to have a permeability of  $4.8 \times 10^{-7}$  cm/sec. Limited degradation that does occur will not cause exceedences of water quality objectives nor impair beneficial uses.

### **CEQA**

In April 2006, the District filed a *Notice of Intent to Adopt a Mitigated Negative Declaration*, but public opposition prompted the District to prepare an Environmental Impact Report (EIR). In July 2006, the District filed a Notice of Preparation for an EIR and certified the document in August 2007. Then in September 2007, members of the public filed two lawsuits against the District challenging the EIR. The lawsuits were settled and/or dismissed in April and June 2008. The District embarked on a new CEQA document process for a scaled-down project and made arrangements with the CEQA consultant to revise the previous document. In March 2009, the District terminated its contract with the CEQA consultant due to delinquent work, and retained a new consultant.

On May 2008, the District filled a Notice of Preparation for an EIR to replace the previous EIR. The main difference between the two documents is the smaller scale of the proposed project. The District will modify the WWTF to treat and dispose of flows up to 0.75 mgd instead of the previously proposed 1.2 mgd.

On 2 February 2012, the District filed a Notice of Determination for the expansion of the WWTF from 0.53 mgd to a flow of 0.75 mgd.

Central Valley Water Board staff reviewed the Final EIR and concurs that the project will not have a significant impact on water quality, particularly because the ponds will be lined with recompacted native clay soils. Additionally, this Order implements and provides monitoring of the mitigation measures that fall within the jurisdiction of the Central Valley Water Board.

### **Title 27**

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

## **Proposed Order Terms and Conditions**

### **Discharge Prohibitions, Specifications and Provisions**

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

The proposed Order restricts the discharge to a monthly average daily flow limit of 0.58 mgd until the District can demonstrate the WWTF can treat and dispose of a monthly average dry weather flow of 0.75 mgd. This Order sets effluent limits for BOD<sub>5</sub> and TSS of 40 mg/L as monthly average and 80 mg/L as daily maximum percent removal.

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

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

The proposed Order includes provisions that require the District to submit a written copy of the Title 22 Engineering Report approval letter from the Department of Public Health, liner design and performance report, and a technical report certifying the WWTF can treat and dispose flows of up to 0.75 mgd. The Order also requires the District to submit a Salinity Management Plan, Nutrient Management Plan, Work Plan for monitoring well installation, and Solids Management Plan.

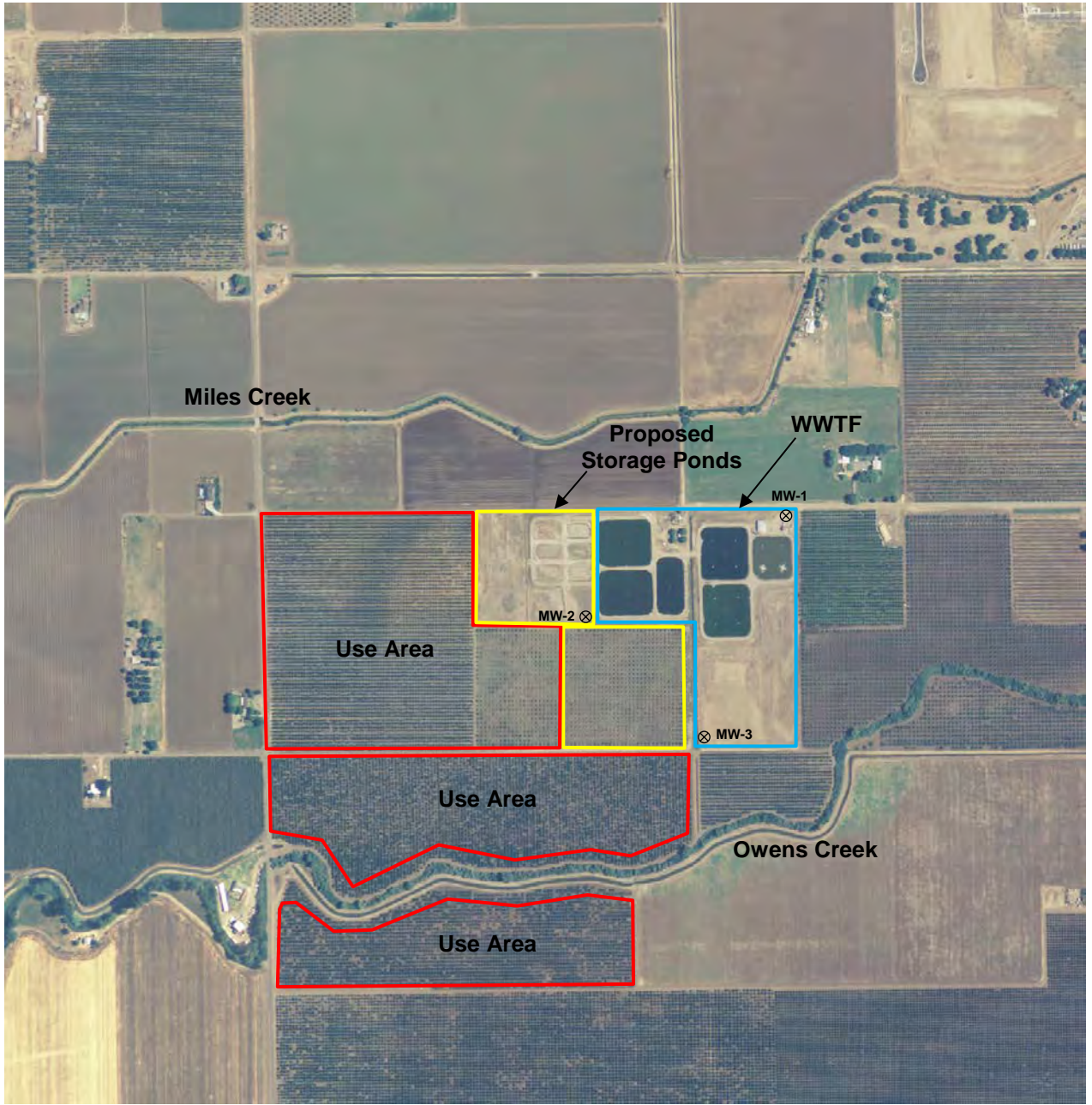
### **Monitoring Requirements**

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

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

### **Reopener**

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



Map Source:

NAIP Aerial Photograph (2005)



Not to Scale

### FACILITY MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0021  
 FOR  
 PLANADA COMMUNITY SERVICES DISTRICT  
 PLANADA WASTEWATER TREATMENT FACILITY  
 MERCED COUNTY

**ATTACHMENT A**

**Headworks**



**Aerated Lagoons**



**Storage Ponds**



**Use Area**

NOT TO SCALE

**FLOW SCHEMATIC**

WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0021  
FOR  
PLANADA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
MERCED COUNTY

**ATTACHMENT B**



**NONPOTABLE WATER INTERNATIONAL SYMBOL**

WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0021  
FOR  
PLANADA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
MERCED COUNTY

**ATTACHMENT C**

**WDRs ORDER NO. R5-2013-0021**  
**ATTACHMENT D**  
**STANDARD REQUIREMENTS FOR**  
**MONITORING WELL INSTALLATION WORK PLANS AND**  
**MONITORING WELL INSTALLATION REPORTS**

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

**SECTION 1 - Monitoring Well Installation Work Plan and**  
**Groundwater Sampling and Analysis Plan**

The monitoring well installation work plan shall contain, at a minimum, the following 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 water bodies and drainage courses, 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
- Cuttings disposal methods
- Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods

C. Monitoring Well Design (in graphic form with rationale provided in narrative 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, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedures for:
- 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 work plan.

### **A. General Information:**

Purpose of the well installation project

Number of monitoring wells installed and identifying label(s) for each

Brief description of geologic and hydrogeologic conditions encountered during well installation

Topographic map showing facility location, roads, surface water bodies

Large-scaled site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, 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

Well boring log (provide for each well)

- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (i.e., total depth drilled if no casing 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 (provide for each well):**

Well construction diagram including:

- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing
- Length and position of slotted casing and size of perforations
- 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 (provide for each well):**

Date(s) and method of development

How well development completion was determined  
Volume of water purged from well and method of development water disposal

F. Well Survey (provide for each well):

Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot)

Ground surface elevation (feet above mean sea level to within 0.01 foot)

Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale)

Present the well survey report data in a table

G. Water Sampling:

Date(s) of sampling

Sample identification

How well was purged

Analytical methods used

How many well volumes purged

Laboratory analytical data sheets

Levels of temperature, EC, and pH at stabilization

Water level elevation(s)

Sample collection, handling, and preservation methods

Groundwater contour map

H. Soil Sampling (if applicable):

Date(s) of sampling

Sample collection, handling, and preservation methods

Sample identification

Analytical methods used

Laboratory analytical data sheets

Present soil sampling data in a table

I. Well Completion Report(s) (as defined in California Water Code §13751). Blank forms are available from California Department of Water Resources' website [www.water.ca.gov](http://www.water.ca.gov). Submit this section under separate cover.

J. Appendix - include, at a minimum, copies of the following:

County-issued well construction permits

Registered engineer or licensed surveyor's report and field notes

Field notes from well development