

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MEETING OF NOVEMBER 4-5, 2015
BARSTOW, CALIFORNIA**

ITEM: 9

**SUBJECT: REVISED WASTE DISCHARGE REQUIREMENTS - ROSAMOND
COMMUNITY SERVICES DISTRICT, DOMESTIC WASTEWATER
TREATMENT FACILITY / RECLAMATION PLANT, KERN
COUNTY**

CHRONOLOGY:

September 14, 1995	Revised Waste Discharge Requirements Adopted (Board Order No. 6-95-107)
July 11, 1996	Amended Waste Discharge Requirements Adopted (Board Order No. 6-95-107A1)
May 10, 2000	Amended Waste Discharge Requirements Adopted (Board Order No. 6-95-107A2)

ISSUE: Should the Water Board revise Waste Discharge Requirements for the Rosamond Community Services District (District) domestic wastewater treatment facility/reclamation plant to, among other items, establish tertiary treatment plant effluent limits allowing recycled water delivery and establish a time schedule for the existing pond system to meet Title 27 liner requirements or allow an alternative treatment and disposal system to be proposed (Enclosure 1).

DISCUSSION: Up to 1.3 million gallons per day (mgd) of sewage is delivered to the District's wastewater treatment facility. The original facility was constructed in the 1950's consisting of four oxidation ponds with a native soil liner. Subsequently, additional ponds were similarly constructed to handle increased sewage flows from the community. There are now 16 ponds in the pond system. In 2006, funding was secured from the State Board to construct and operate a 0.5 mgd tertiary treatment plant to produce recycled water. At that time, no recycled water users were identified and the tertiary plant effluent was disposed into the pond system. Recently, the District has secured a number of recycled water users and applied to the Water Board for authorization to treat and deliver recycled water. The revised order will address a number of issues as follows.

- a. Establish tertiary disinfected recycled water treatment requirements for the 0.5 mgd tertiary treatment plant based on Title 22 criteria required by the State Board, Division of Drinking Water. The tertiary plant uses Biolac® activated sludge treatment and ultraviolet disinfection technology. Data indicates the plant consistently achieves required recycled water treatment levels.
- b. There are four existing groundwater monitoring wells located near the first eight ponds. Total dissolved solids and nitrate concentrations have exceeded the receiving groundwater quality objectives causing pollution. Well no. 2 exceeds the objective for nitrate and well no. 4 exceeds the objective for total dissolved solids.

Because the ponds do not have an engineered liner and the bottoms were re-compacted native soil consisting of some clay with silt and sand, the pond water has leaked and percolated to groundwater. The ponds were not designed as percolation ponds. The pond content water is classified as designated waste. The proposed order indicates that discharges from the pond system are not exempt from the liner requirements of Title 27 because the unauthorized discharge has polluted groundwater.

Therefore, the proposed order establishes a five-year time schedule for the District to either:

- (1) line the ponds to meet Title 27 standards, or
 - (2) propose an alternative treatment and disposal system that will not pollute groundwater.
- c. There are insufficient monitoring wells to evaluate the effect of discharges on receiving groundwater beneath the pond system. The Monitoring and Reporting Program establishes an 18-month time schedule for the District to submit a work plan to install additional groundwater monitor wells and then establish the background water quality near the site.
 - d. The Monitoring and Reporting Program requires that groundwater data be uploaded to the State Board's Geotracker database. This is the first waste discharge requirements program facility that is being required to interact with Geotracker.
 - e. Consolidate and replace the existing order and amendments; add language that State Board now requires; and improve the Monitoring and Reporting Program.

The District’s consultant submitted comments on the tentative order (Enclosure 2) and staff responses are provided (Enclosure 3). Minor changes were made to the proposed order.

The District agreed with Water Board staff that additional monitoring wells are required to establish the nature and extent of groundwater pollution and local direction of groundwater flow. The District supports the collection of data to determine its contribution of waste to groundwater to determine how to better address the groundwater pollution.

There are three lines of evidence regarding the source of pollution. First, the ponds are not constructed with an impervious liner and all native soil liners eventually leak. Second, there are no other discharges to groundwater in the vicinity of the wastewater plant. Third, time series data indicate increasing concentrations of total dissolved solids and nitrate in groundwater.

In a separate action, the Executive Officer will consider authorizing the Discharger to become an Administrator responsible for recycled water delivery under Order WQO-2014-0090 (General Waste Discharge Requirements for Recycled Water Use).

RECOMMENDATION: Adoption of Order as proposed.

ENCLOSURES	ITEM	BATE NUMBER
1	Board Order No. R6V-2015-Proposed	9-5
2	Comment Letter from GEI Consultants (e-mail) with attachment	9-57
3	Response to Comment Letter	9-65
4	Presentation	9-73

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ENCLOSURE 1

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER R6V-2015-(PROPOSED)
WDID No. 6B150112001**

REVISED WASTE DISCHARGE REQUIREMENTS

FOR

**ROSAMOND COMMUNITY SERVICES DISTRICT
DOMESTIC WASTEWATER TREATMENT FACILITY / RECLAMATION PLANT**

_____ Kern County _____

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Discharger

The Rosamond Community Services District (hereinafter "Discharger") submitted a completed Report of Waste Discharge for revised Waste Discharge Requirements (WDRs) under Water Code section 13260 on June 12, 2015. The documents constituting the Report of Waste Discharge: Form 200; revised Title 22 Engineering Report which includes Draft Rules and Regulations, plans from 2007 from Boyle Engineering Corporation.

The Discharger's facultative oxidation/evaporation ponds will be referred to as the "pond system" or "evaporation/percolation ponds" and the tertiary treatment plant is hereinafter referred to as the "plant". The pond system and the plant are collectively referred to jointly as the "Facility." Attachment A lists the items included with the Report of Waste Discharge, Engineering Report and other references.

2. Reason for Action

The Water Board is revising WDRs for the following major reasons.

- a. Establish recycled water treatment requirements for a 0.5 million gallon per day (mgd) tertiary treatment plant constructed in 2006 for the purpose of delivering recycled water to the Golden Queen Mine cyanide heap leach project and to various recreational users such as schools, parks and medians within the Discharger's service area.
- b. Recognize that the pond system has contributed to receiving groundwater pollution and establish a time schedule for providing plans and an implementation schedule to ensure the discharge from the ponds/facility conforms to California Code of Regulations (CCR), title 27 and State Board Resolution 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California).
- c. Consolidate WDRs contained in the current WDR 6-95-107 and two subsequent amendments.

- d. Revise the Monitoring and Reporting Program to establish applicable Facility effluent and operations monitoring and revise the groundwater monitoring program. The Monitoring and Reporting Program requires additional wells to be installed to evaluate the nature and extent of groundwater pollution at the Facility.
- e. Require groundwater monitoring data to be uploaded to the State Water Board's Geotracker database.
- f. Include language consistent with current State Board requirements.

In a separate action, the Executive Officer will consider authorizing the Discharger to become an Administrator responsible for recycled water delivery under Order WQO-2014-0090 (General Waste Discharge Requirements for Recycled Water Use).

3. Order History

The Water Board initially established WDRs for the Discharger under Resolution 66-17 (adopted on October 27, 1966) for discharge of untreated wastewater to four oxidation/evaporation ponds. The Board subsequently revised Waste Discharge Requirements six times through Board Orders adopted on the following dates: November 15, 1973; March 13, 1984; October 12, 1984; March 12, 1987; January 11, 1990 and September 14, 1995.

On September 14, 1995, the Water Board adopted Board Order 6-95-107 revising WDRs. That Order was subsequently amended twice through Order 6-95-107A1, adopted on July 11, 1996, and Order 6-95-107A2, adopted on May 10, 2000 to allow additional oxidation/evaporation ponds.

The Water Board sent a draft order to both the Discharger and State Water Board in 2007 for the purpose of securing grant funding to construct the tertiary plant. That Order was never adopted.

4. Facility Locations

The natural ground-surface at the Facility vicinity is flat and slopes in an easterly direction toward Rosamond Dry Lakebed at a gradient of approximately 0.005 feet/foot. The Dry Lakebed is located approximately 2.5 miles east of the site.

The Facility location is shown on Attachment B and is located southeast of the unincorporated Kern County community of Rosamond, approximately one mile east of Highway 14. The Facility is within Section 27, T9N, R12W, SBB&M.

5. Land Ownership

The treatment plant site is located on land owned by the Discharger. The plant is located at the address 1460 10TH Street West, Rosamond, California. The Facility currently occupies the following parcel numbers in Kern County.

Facility Parcels

Assessor's Parcel Numbers
471-040-01-00-9
471-190-01-00-3
471-190-02-00-6
471-190-03-00-9
471-190-04-00-2
471-190-05-00-5
471-190-06-00-8
471-190-07-00-1
471-190-09-00-7
471-190-27-00-9
471-190-29-00-5
471-190-30-00-7
471-190-31-00-0
471-190-32-00-3
471-190-33-00-6
471-190-35-00-2

6. Geology / Soil Conditions

The geologic material underlying the treatment plant site consists of alluvium underlain by bedrock. U.S. Department of Agriculture (Soil Conservation Service) investigation results show alluvium at the site, located between the ground surface and a depth of five feet, contains soluble salts (USDA, 1970).

Based on a study done by BSK Associates on June 25, 2007, soil at the site, based on Sieve Analyses in method ASTM D-422, is 54-62% sand with 4-25% clay fraction. This indicates that the soil in the area has a higher sand content, with a low clay fraction.

7. Facility Description

The Facility is comprised of three components and two treatment train components: (1) Collection system and head works, (2) Original pond system and (3) Tertiary Treatment Plant. Facility Site features are shown on Attachments C and D.

- a. Collection System and Head Works – Up to 1.3 million gallons per day (mgd in 2014) of untreated wastewater influent from the community of Rosamond is delivered to the head works through a gravity interceptor sewer for treatment and disposal. The head works has a bar screen and grit removal. Pumps lift the flow about 50 feet through a valve system to either the 16 oxidation/evaporation ponds or the tertiary treatment plant. The sewer collection system and Facility treatment and disposal system is capable of conveying and disposing of an average influent flow of 2.0 mgd.

- b. Pond System – Currently, approximately 0.8 mgd of flow is delivered to the pond system first and is discharged into Pond No. 13, which has five mechanical aerators. Effluent from this pond is distributed to 12 additional evaporation/percolation ponds (Nos. 1 through 12). Effluent to these ponds is distributed, but usually is split into two separate parallel pond flow paths. Pond Nos. 14, 15 and 17 are currently used to dispose through evaporation of the tertiary treated water from the plant. There are a total of 16 ponds, but no pond numbered pond no. 16. The total area of the 16 evaporation/percolation ponds is approximately 160 acres. The total area of the Facility (ponds and tertiary plant) is 250 acres. Discharge of untreated wastewater to ponds located at the site began in the 1950s.

All ponds are constructed by re-compaction of the native soil which has small clay content. Any potential on-site clay liner material would have a questionable clay fraction, even if large fractions of sand were separated to produce an on-site clay liner.

Evidence described below and in subsequent findings indicates that the pond bottom clay liners are not preventing the downward movement of water to underlying receiving groundwater. The evaporation ponds are effectively percolation ponds and discharging or leaking into the groundwater.

Staff collected a water sample on July 15, 2015 from the last evaporation/percolation pond containing water (Pond No. 8) and determined that pond water was very low quality as follows.

Pond Effluent Quality

Constituent	Concentration (mg/L)
Biochemical Oxygen Demand (BOD)	190
Chemical Oxygen Demand (COD)	1300
Total Kjeldahl Nitrogen (TKN)	130
Total Dissolved Solids (TDS)	3,000

The salt (TDS) content was high due to concentrating evaporative processes and the nutrient content was high due to lack of nitrogen reduction processes.

- c. Tertiary Treatment Plant – The tertiary treatment plant was constructed in 2009 and has the capacity to treat 0.5 mgd of wastewater. The tertiary plant can be later expanded to treat 1.0 mgd. The tertiary plant was constructed in a 12-acre area located within the existing wastewater treatment plant disposal site. The existing influent pump station conveys wastewater to the tertiary treatment plant.

The tertiary plant produces higher quality effluent than the pond system as shown below, based on a sample obtained by staff on July 15, 2015. The tertiary treated water is currently discharged to ponds 17, 15 and 14. In the future the water will be distributed to recycled water users via purple pipe.

Treatment Plant Effluent Quality

Constituent	Concentration
Biochemical Oxygen Demand (BOD)	10 mg/L
Chemical Oxygen Demand (COD)	16 mg/L
Total Kjeldahl Nitrogen (TKN)	0.88 mg/L
Total Dissolved Solids (TDS)	480 mg/L
Turbidity	0.2 (95%) or 0.5 (24hr) NTU
Total Coliform	2.0 MPN/100 ml

The tertiary plant includes the following wastewater treatment components:

- Activated sludge basin with nitrogen removal (nitrification and denitrification),
- Secondary clarifier,
- Ultraviolet disinfection,
- Sludge removed by the clarifier will either be returned to the activated sludge basin or conveyed to six surface sludge drying beds which are lined with high density polyethylene (HDPE). The total area of the six sludge drying beds is approximately one acre, and
- Solids removed from the bar screen are hauled offsite for disposal at an authorized disposal site. Dried solids generated from cleaning of the sludge drying beds and existing oxidation/evaporation ponds are hauled offsite for disposal/reuse at an authorized reuse or disposal site. Disposal of solids at the treatment/disposal site is not authorized.

8. Septage and Influent Monitoring

The Discharger allows septage haulers to dispose loads at the Facility. Previously, the septage load out point was at the Facility head-works. Since septage would interfere with the activated sludge processes of the tertiary plant, the septage load out point was moved to oxidation pond 3. Nonetheless, the septage loads are still considered part of the influent and should be treated as such. This Order requires monitoring and reporting of received septage water.

9. Authorized Disposal/Recycling Sites

Previous Orders, and this Order, does not authorize the discharge of percolating pond system wastewater or sludge drying bed liquid to groundwater.

This Order authorizes the discharge of untreated wastewater, disinfected tertiary-treated wastewater, and septage to the existing 16 pond system that are stabilization and evaporation ponds.

Use of tertiary treated disinfected wastewater for non-potable uses within the Facility is also authorized including: (1) landscape irrigation, (2) facility wash down, and (3) soil compaction and dust control during construction of new facilities.

Other recycled water use areas are not authorized by this Order. However, the Discharger has applied for coverage under State Board Water Quality Order 2014-0090 (General Waste Discharge Requirements for Recycled Water Use) to become an Administrator of recycled water uses. Separate authorization for coverage under that Order would be authorized by the Executive Officer issuing a Notice of Applicability.

10. Receiving Groundwater Quality

The Discharger has installed four on-site monitoring wells numbered 1 through 4 prior to 1995. The depth to groundwater at the site ranges from 65 to 80 feet. The limited data submitted via self-reports and well surveys suggest that there are two groundwater mounds underneath ponds 13 and 8. The existing groundwater monitoring network does not cover the entire footprint of the Facility. Additional groundwater monitoring wells are required to be installed according to the schedule in the Monitoring and Reporting Program.

The following table summarizes data on background groundwater quality in the area of the treatment plant site. The initial data were collected by the California Department of Water Resources and published in a report titled: Groundwater and Wastewater Quality Study, Antelope Valley, Los Angeles and Kern Counties, March 1968 (CDWR, 1968). Some recent data from the existing groundwater monitoring wells are included. This table was included in the draft Order issued in 2007.

Quality of Groundwater and Influent Wastewater

	Year	Total Dissolved Solids (mg/L)	Nitrate Total Nitrogen (mg/L as N)
Background quality (groundwater underlying pond site) ¹	1953 – 1968	290 to 390	Non-detect to 0.7
Existing quality (groundwater underlying pond site) ²	2003 – 2005	660 to 2700	2.4 to 5.4

¹ Results are for samples collected from four groundwater monitoring wells located at the pond site. Results were reported by the Discharger in self-monitoring reports.

² Results of analyses of samples reported by the Discharger in self-monitoring reports.

Comparison of the current groundwater quality to historical data indicates TDS and nitrate concentrations in groundwater underlying the ponds have increased over time.

Current Groundwater Quality¹

	Well No. 1 (MW 1)	Well No. 2 (MW 2)	Well No. 3 (MW 3)	Well No. 4 (MW 4)
Nitrate as Nitrogen (mg/L)	6.9	13	4.3	1.3
Total Dissolved Solids (mg/L)	1,000	1,500	1,100	2,200

¹ Results of sample analyses collected on September 9, 2014.

Analyses of the constituents nitrate and TDS in monitoring wells 1 thru 4 indicate increasing nitrate concentrations in wells 2 and 3 and increasing TDS concentrations in wells 2 and 3 (see Attachment E). Data show there is a release of nitrate and TDS from the Facility that caused a pollution of receiving groundwater. These results confirm that the integrity of the Facility's pond liners has been compromised and that discharges from the ponds have degraded and polluted receiving groundwater in violations of Section I, Requirement C.1 and C.4 of Order No. 6-95-107, the Order previously regulating the discharges for this site. The extent of pollution, although not confirmed, is likely localized.

Evaporation concentrates salt in the ponds each summer as the ponds dry and the salt re-dissolves in the ponds when they contain winter flow. The increased salinity in the pond water percolates through the underlying native soil liner and also dissolves natural soil minerals in the vadose zone underlying the ponds. Further, because there is little denitrification occurring in the pond system, the percolated effluent contains elevated nitrate concentrations.

11. Lahontan Basin Plan

The Water Board adopted a *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which became effective on March 31, 1995. Subsequent amendments to the Basin Plan were adopted. This Order implements the Basin Plan, as amended.

12. Receiving Waters and Beneficial Uses

The receiving waters are the groundwater of the Antelope Valley (CA Department of Water Resources Basin No. 6-44). The beneficial uses for this groundwater listed in the Basin Plan are the following:

- a. Municipal and domestic supply (MUN),
- b. Agricultural supply (AGR),
- c. Industrial supply (IND), and
- d. Freshwater replenishment (FRSH).

13. Maintenance of High Quality Waters in California, State Board Resolution 68-16, Degradation Analysis

State Water Resources Control Board, Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California," requires continued maintenance of existing high quality waters. A degradation analysis is not required at this time, because the Discharger is not proposing an additional onsite discharge. This Order establishes a Time Schedule for the Discharger to propose and implement a treatment and disposal plan that will remedy the existing unauthorized discharge and prevent further pollution. If the Discharger proposes a future project that would result in groundwater degradation, then a degradation analysis is required in accordance with Resolution 68-16.

14. Basis for Numerical Receiving Groundwater Limitations

The water quality objectives for groundwater with a “Municipal” beneficial use are defined in the Basin Plan, and include both the primary and secondary drinking water standards (maximum contaminant levels, or MCLs), which are set by the Division of Drinking Water. For nitrate as nitrogen, the limit is 10/mg/L. For TDS there is a three-part standard: 500 mg/L Recommended, 1,000 mg/L Upper, and 1,500 mg/L Short-Term.

15. Water Code 13172/Title 27 Exemptions for Discharges of Domestic Wastewater

Water Code section 13172 directed the State Water Resources Control Board (State Water Board) to write regulations for waste disposal sites, “except for sewage treatment plants...” to protect water quality. Those regulations are now incorporated in the CCR, title 27. The statute exempts the Wastewater Treatment Facilities, but does not exempt the disposal of treated wastewater.

16. California Code of Regulations, Title 27

California Code of Regulations, title 27, section 20090(a), discharges of domestic sewage or treated effluent from title 27 provided that: (1) the activity meets, and continues to meet, all preconditions listed: Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

The wastewater discharged to the pond system is from domestic sewage or treated effluent and is, and has been, regulated by waste discharge requirements. The Facility is a municipal wastewater treatment plant. Sludges are properly disposed offsite. However, the unauthorized discharge of seepage from the pond system does not meet water quality objectives. Therefore, the unauthorized discharge from the pond system is not exempt from the requirements of title 27. Although the discharge of treated effluent from the tertiary plant meets water quality objectives, only a small portion of the effluent is being treated before it is discharged to the ponds. Because of the inability to meet the requirements for the discharges from the ponds to be exempt from title 27, this Order requires that the Discharger either:

- a. Construct its pond system to meet the requirements of title 27, or
- b. Modify its current treatment and disposal operations allowing discharge of a higher quality of effluent that meets water quality objectives.

17. State Water Board Recycled Water Policy

State Water Board Resolution No. 2009-0011, "Adoption of a Policy for Water Quality Control for Recycled Water," references and adopts the "State Water Resources Control Board Recycled Water Policy" (Recycled Water Policy). The Recycled Water Policy provides direction to the State and Regional Water Boards regarding issuing permits for recycled water projects. This Order implements the Recycled Water Policy.

The Discharger participated in development of the Salt and Nutrient Management Plan for the Antelope Valley 2014 (plan). The Water Board accepted that plan on December 8, 2014. That plan did not evaluate salt and nutrient loading associated with discrete discharges from any activity. Rather, that plan used existing groundwater data and evaluated each sub-basin within the Antelope Valley. This Facility is within the Lancaster sub-basin.

That plan evaluated possible future recycled water projects within the Lancaster sub-basin (plan Figure 3-17) and volumes of recycled water likely produced (plan Table 3-4). Using a simplified computer model, the plan concluded that TDS and arsenic were the most sensitive constituents that would consume assimilative capacity. The plan concludes that for the Antelope Valley as a whole, the water quality management goal for TDS would be reached in 139 years and for arsenic in 47 years in scenario no. 6, the most conservative scenario evaluated (plan Table 4.8).

The plan did not evaluate leakage occurring from the Facility pond system. Essentially, the plan is predicated upon expanded delivery and use of recycled water with some groundwater recharge associated with existing wastewater plants, but no recharge from the Facility.

18. Recycled Water Treatment and Use Requirements

The State Water Resources Control Board's Division of Drinking Water (DDW), (which was formerly part of the Department of Public Health) established criteria for the treatment and use of recycled water. These criteria are codified in CCR, article 3 of chapter 3 of division 4, title 22, and section 60303 et seq.

- a. Recycled Water Treatment Criteria – This Order establishes criteria for the treatment of recycled water quality to ensure compliance with applicable California CCR, title 22 criteria based on recommendations from the DDW in an approved title 22 Engineering Report. The DDW provided recommendations in 2003 and 2007. Subsequent to the Engineering Report provided by the Discharger in 2015, the DDW provided recommendations. This Order prohibits delivery of recycled water until the Division of Drinking Water approves the Engineering Report for the tertiary plant and the **Executive Officer issues a concurrence letter**. As stated above, the Dischargers' tertiary plant currently meets treatment criteria.

- b. Recycled Water Use Criteria – This Order does not establish criteria for the use of recycled water (except for in-plant uses). The Discharger has submitted a Report of Waste Discharge, along with an Engineering Report to DDW on July 12, 2015, to become an Administrator of recycled water uses under State Board Order WQO 2014-0090. After DDW approves the Engineering Report, the Water Boards' Executive Officer intends to issue a Notice of Applicability for coverage under the State Water Board's recycled water order.

19. Basis for Effluent Limitations

- a. Pond System – As stated in previous orders, the ponds were constructed with a compacted native soil liner and were intended to evaporate the effluent, not percolate the discharge. Because of this assumption, no effluent limits were established in previous orders. However, monitoring data indicate that percolation is occurring and the groundwater below the ponds exhibits a condition of pollution. The Facility is not currently capable of achieving lower treatment effluent limitations. Thus, this Order does not establish effluent limitations for discharges to/from the pond system, but instead establishes a Time Schedule for the Discharger to propose and implement upgraded treatment or disposal systems to satisfy title 27 and Basin Plan requirements. (see Finding 16, above)
- b. Tertiary Plant – This Order establishes recycled water treatment criteria based on DDW recommendations. Because the plant produces disinfected, tertiary recycled water, the plant is capable of producing a lower concentration of BOD, suspended solids, and total nitrogen than the secondary treatment standards. This Order establishes U.S. EPA secondary standards for the treatment plant and a total nitrogen limit of 10/mg/L to ensure that receiving water at any point of recycled water use are not affected.

20. California Environmental Quality Act (CEQA)

The project for purposes of CEQA is the whole of the action, which includes continuing the operation of the existing pond system and establishing recycled water treatment limitations for the tertiary plant, and requirements for the sludge drying beds which were constructed with the plant. As described in Finding 2, there are no changes to the Facility that are being approved that would result in significant adverse impacts to the environment.

This permit establishes recycled water requirements for the tertiary system, which will continue to protect the environment, and establishes a time schedule for upgrades to the ponds or the treatment system in order to meet Title 27, anti-degradation, and Basin Plan objectives.

Therefore, this project is exempt from CEQA pursuant to California Code of Regulations, title 14 section 15061(b)(3), where it can be seen with certainty that there is no possibility that the project may have a significant effect on the environment.

- a. Future activities associated with upgrades necessary to deliver and use recycled water, such as construction of pumps and pipelines or actions to modify use areas to meet Title 22 criteria are not approved by this Order but are covered under the State General Order 2014-0090, and would need to undergo further CEQA review, as necessary.
- b. Similarly, the construction of future Projects to satisfy the requirement of the Time Schedules in this Order and meet Basin Plan Requirements are not approved here. This Order requires the Discharger to submit plans and implement a time schedule to construct a project that will meet Basin Plan requirements. That project, and its potential future impacts, speculative at this point, is not regulated here and is subject to further CEQA review by the lead agency for that project.

21. Consideration of Water Code Section 13241 Considerations

Pursuant to Water Code section 13241, the requirements of this Order take into consideration the following factors.

- a. Past, present, and probable future beneficial uses of water – The receiving waters are groundwater of the Antelope Valley Groundwater Basin. The receiving water limits in this Order are to maintain the most sensitive beneficial use: Municipal and Domestic Supply (MUN). This Order establishes a Time Schedule for the Discharger to propose plans and an implementation schedule to construct a project to restore and protect these uses.
- b. Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto – The Antelope Valley is a closed groundwater basin and will experience increases in salt loading from natural and anthropogenic sources over time. In the vicinity of the Facility, historical data indicate that TDS and nitrate concentrations previously met beneficial uses, which the receiving groundwater does not now meet. It is in the best interest of the people of the state for the Discharger to propose and construct facilities to limit further groundwater pollution. This Order establishes a Time Schedule for the Discharger to propose plans and an implementation schedule to construct a project to restore and protect beneficial uses.
- c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which will affect water quality in the area – The Antelope Valley groundwater basin is currently in an adjudication process. When final, the Rosamond community will better understand the limits placed on its water consumption and economic value of its wastewater effluent. The Discharger will have an opportunity to develop and propose a future project to meet Basin Plan objectives and, in consultation with the community and other Antelope Valley stakeholders, propose a project to meet the long-term needs for water and recycled water use in the community.

- d. Economic considerations – Construction of the tertiary plant was completed, in part, with a grant obtained from the State Water Board. Operation of the tertiary plant will incur additional costs primarily offset with recycled water delivery use fees. Costs to construct and operate facilities that will meet Basin Plan objectives are indeterminate at this time. The Water Board expects the Discharger to apply for, and receive some level of support from state loan or grant opportunities. The costs associated with continued operation of the Facility are expected to be similar to that experienced by other communities. Costs associated with a future project to ensure receiving water quality objectives are met are unknown. However, other communities have completed such projects when required.
- e. The need for developing housing within the region – Continued operation and eventual expansion or modification of the treatment plant is needed to treat domestic wastewater from the growing Rosamond community and protect receiving water beneficial uses.
- f. The need to develop and use recycled water – This Order establishes treatment limits for the tertiary plant that will allow the Discharger for the first time to deliver up to 0.5 mgd of recycled water. The Facility is constructed so that an expansion project, if proposed by the Discharger, would double the amount of recycled water produced. As originally proposed in the Antelope Valley Integrated Regional Water Management Plan a stem delivery system was conceived allowing recycled water from the Palmdale, Lancaster and Rosamond wastewater treatment plants to be delivered to various recycled water uses in the Antelope Valley.

22. Time Schedule

Pursuant to Water Code sections 13263 (c) and 13300, whenever the Regional Water Board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the Regional Water Board, the Board may require the Discharger to submit for the Board, or its Executive Officer's approval, such modifications to its system as maybe be deemed necessary, along with a detailed time schedule of specific actions the Discharger shall take in order to correct or prevent a violation of requirements.

This Order contains a time schedule, subject to revision at the discretion of the Water Board, for the Discharger to propose and implement a project that will result in the Discharger meeting Basin Plan receiving water objectives, title 27 requirements, and anti-degradation requirements.

23. Right to Safe, Clean, Affordable, and Accessible Water

California Water Code section 106.3 requires all relevant State agencies to consider that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order does not authorize the discharge to degrade the groundwater above drinking water

standards. The groundwater in the area includes a municipal beneficial use. The nearest water supply well [State Well No. 1500485-001] is located about 1.1 miles to the southwest of the Facility.

This Order acknowledges that historical discharges have polluted groundwater and establishes a time schedule for the Discharger to propose and implement actions to ensure receiving groundwater quality objectives are not further polluted. If the beneficial use of the groundwater has been impaired, the Water Board may require in a separate order that the Discharger clean up and abate the impacts to the groundwater.

This Order requires the Discharger to monitor groundwater and install additional monitoring wells to understand the full effect on groundwater from discharges from the Facility. Although preliminary evidence suggests that the Facility is not meeting the requirements for title 27, additional requirements of this Order will bring the Facility into compliance with title 27 and be protective of water quality.

24. Technical and Monitoring Reports

This Order requires the Discharger to submit self-monitoring and technical reports pursuant to Water Code section 13267. These reports will establish compliance with the Order requirements and ensure the discharge is in compliance with the Basin Plan. The elements in the monitoring program are focused on the major activities and constituents of concern associated with the treatment and disposal of domestic wastewater that are polluting receiving groundwater. The monitoring reports should establish that the Discharger is safely treating recycled water.

The Monitoring and Reporting Program associated with this Order requires the Discharger to submit technical groundwater reports to result in the following:

- Installing new groundwater monitoring wells,
- Providing a sufficient number, placement and construction of the wells
- Collecting representative groundwater samples to evaluate water quality, and
- Determining the nature and extent of polluted receiving groundwater.

This Order requires reports describing how the Facility will be upgraded with a project to ensure that receiving water quality objectives are met, but not pursuant to this section of the Water Code.

25. Classification

Pursuant to CCR, title 23, section 2200(a) the "Threat to Water Quality" from the discharge from the Facility is "Category (2)" because discharges has impaired the designated beneficial uses and caused secondary standards to be violated. The "Complexity" is "Category (B)" because the Facility has physical, chemical and biological treatment.

26. Notification of Interested Parties

The Lahontan Water Board has notified the Discharger and interested persons of its intent to revise Waste Discharge Requirements for the discharge.

27. Consideration of Public Comments

The Lahontan Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Water Code sections 13260 and 13263 and the authority of the Water Board, the following Orders are hereby rescinded, except for enforcement related purposes: 6-95-107, 6-95-107A1 and 6-95-107A2.

IT IS FURTHER HEREBY ORDERED, pursuant to Water Code sections 13260, 13263, and 13267 the Discharger must comply with the following:

I. FLOW LIMITS

- A. The combined flow of: (1) untreated wastewater, (2) tertiary-treated wastewater and (3) septage to the oxidation/evaporation/percolation ponds during a 24-hour period must not exceed 2.0 million gallons.
- B. The untreated wastewater flow to the tertiary treatment plant during a 24-hour period must not exceed 0.5 million gallons.
- C. The freeboard in any pond system must be not less than two feet as measured from a fixed referenced indicator based upon the lowest pond dike elevation.

II. DISCHARGE LIMITATIONS

- A. There are no effluent limitations associated with the pond system. However, because the ponds are percolating to groundwater, the Discharger must either upgrade the ponds to meet title 27 requirements, limiting the discharges to the groundwater, or upgrade the treatment and disposal operations to produce of a higher quality of effluent, whose disposal within the current ponds will not result in the groundwater violating water quality objectives.
- B. The tertiary treatment plant must not exceed the following limits:

Tertiary Plant Effluent Limitations

Constituent	Units	Average monthly	Average weekly
BOD (5-day at 20°C)	mg/L	30	45
TSS	mg/L	30	45

Constituent	Units	Average monthly	Average weekly
Total nitrogen	mg/L	10.0	--
Methylene Blue Active Substances	mg/L	1.0	

- C. The effluent produced by the tertiary treatment plant must have a pH of not less than 6.0 nor more than 9.0.
- D. The effluent produced by the tertiary treatment plant must have a dissolved oxygen concentration of not less than 1.0 mg/L.

III. RECEIVING WATER LIMITATIONS

- A. The discharge from the pond system must not cause a violation of the water quality objectives for the groundwater of the Lancaster Hydrologic Area of the Antelope Hydrologic Unit.
- B. The discharge must not cause a violation of any applicable water quality standard for receiving water adopted by the Water Board or State Water Resources Control Board.
- C. The Discharger must not cause the groundwater of the Lancaster Hydrologic Area of the Antelope Hydrologic Unit to contain:
 - 1. Bacteria: A median concentration of coliform organisms over any seven-day period must not be in excess of (or equal to) 1.1 MPN/100 milliliters.
 - 2. Chemical constituents: Groundwater which is designated as MUN must not contain concentrations of chemical constituents in excess of the MCL or Secondary MCL (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22.
 - a. Table 64431-A of section 64431 (Inorganic Chemicals),
 - b. Table 64431-B of section 64431 (Fluoride),
 - c. Table 64444-A of section 64444 (Organic Chemicals),
 - d. Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Limits),
 - e. Table 64449-B of Section 64449 (SMCLs – Consumer Acceptance Ranges), and
 - f. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
 - 3. Radioactivity - Waters designated as MUN must not contain concentrations of radionuclides in excess of limits specified in the following provisions of CCR, title 22.
 - a. Section 64442, Table 64442, and

- b. Section 64443, Table 64443, including future changes as the changes take effect.
4. Taste and Odors - Waters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For waters designated as MUN, at a minimum, concentrations must not exceed adopted SMCLs specified in
 - a. Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Limits), and
 - b. Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Ranges) of CCR, title 22, including future changes as the changes take effect.
5. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e. agricultural purposes).
6. Groundwater shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

IV. WATER RECYCLING TREATMENT REQUIREMENTS

This Order does not authorize the use of recycled water, except for onsite facility uses: (1) landscape watering, (2) plant wash down, (3) construction compaction or (4) dust control. Recycled water use criteria are separately established.

- A. The effluent produced by the tertiary treatment plant must comply with the Uniform Statewide Reclamation Criteria, which are contained in CCR, title 22, sections 60301 through 60355.
- B. The effluent produced by the tertiary treatment plant must be disinfected tertiary treated wastewater as defined in CCR, title 22.
- C. The effluent produced by the tertiary treatment plant must be an oxidized wastewater and a wastewater that has been filtered by the method described below.
- D. The effluent has been coagulated and passed through natural undisturbed soils or the bed of a filter and the turbidity concentration of the effluent does not exceed any of the following:
 1. A 24-hour average value of two (2) nephelometric turbidity units (2 NTUs),
 2. Five (5) NTUs more than 5% of the time during a 24-hour period, and
 3. 10 NTUs at any time.

- E. The effluent produced by the tertiary treatment plant must be a filtered and subsequently disinfected wastewater that is disinfected by an ultraviolet disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as poliovirus may be used for purposes of the demonstration.
- F. The median concentration of total coliform bacteria measured in the filtered and disinfected effluent produced by the treatment plant must not exceed an most probable number (MPN) of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria must not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample must exceed an MPN of 240 total coliform bacteria per 100 milliliters.
- G. The criteria specified by the State Water Board Division of Drinking Water in its letter dated August 25, 2015, *Attachment G: UV Disinfection System Spot Check Bioassay and Conditions*, apply to operation of the UV disinfection system.
- H. The Discharger must comply with other operational limitations and specifications as recommended by the Division of Drinking Water.
- I. Use of recycled water from the tertiary treatment plant is prohibited until the Division of Drinking Water approves the Title 22 Engineering Report for the tertiary Plant and the Executive Officer issues concurrence.

V. GENERAL REQUIREMENTS AND PROHIBITIONS

- A. Industrial waste discharge is prohibited in the septage discharged into the pond system.
- B. Seepage of liquid from the pond system and sludge drying beds is prohibited. The sludge beds must meet the equivalent of the title 27 liner requirements.
- C. The discharge, bypass, or diversion of untreated or treated wastewater, sludge, grease, or oils from the collection system, transport, or tertiary plant treatment system, except to authorized recycled water uses, or to adjacent land areas or surface waters is prohibited.
- D. Surface flow, or visible discharge of untreated or treated wastewater, from the Authorized Disposal/Recycling Sites (described in Findings) to adjacent land areas or surface waters is prohibited.
- E. All facilities used for collection, transport, treatment, or disposal of waste regulated by this Order must be adequately protected against overflow, washout, inundation,

structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

- F. The discharge must not cause pollution, as defined in California Water Code section 13050, subdivision (l), or a threatened pollution.
- G. Neither the treatment nor the discharge must cause a nuisance, as defined in California Water Code section 13050, subdivision (m).
- H. The disposal of waste residue, including sludge, must be in a manner in compliance with all local, state, and federal requirements.
- I. Treated wastewater used for dust control or soil compaction must be applied at a rate and amount that does not cause runoff or excessive ponding.
- J. The tertiary treatment plant must be operated as described in Discharger's Report of Waste Discharge and approved Engineering Report.
- K. The tertiary treatment plant must be maintained at maximum operating efficiency in compliance with this Order.
- L. The discharge of waste, as defined in the California Water Code, which causes violation of any narrative or numeric Water Quality Objective (WQO) contained in the Basin Plan, is prohibited.
- M. The calculation of background water quality is required. It requires a nitrate and a total dissolved solids concentration (12-month average concentration) in excess of existing water quality in the groundwater compliance monitoring well (The existing quality must be equal to the upper 99% confidence interval for the first eight nitrate samples collected from the well.)

VI. PROVISIONS

A. Operator Certificates

The Facility must be supervised by persons possessing a wastewater treatment plant operator certificate of appropriate grade pursuant to CCR, title 23, section 3670 et seq.

B. Standard Provisions

The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "F" which is made part of this Order.

C. Monitoring and Reporting

The Discharger must comply with the Monitoring and Reporting Program made a part of this Order. Reports requested under the Monitoring and Reporting Program are being required to monitor the effects on water quality from known or suspected discharges of waste to waters of the State as a result of releases of treated wastewater or treated wastewater regulated by this Order.

VII. TIME SCHEDULES

Pursuant to Water Code sections 13263 (c) and 13300 the Discharger must comply with the following time schedule order to submit plans, implement schedules, and provide status reports for a project that will result in the pond system meeting receiving water objectives or achieving title 27 compliance and prevent further groundwater pollution.

The Water Board may not specify the manner or method that the Discharger decides to modify and/or upgrade its treatment and disposal system. The Discharger may elect to increase the tertiary treatment plant capacity to treat the total flow and establish acceptable disposal options to ensure Facility discharges meet receiving water quality objectives. Alternatively, the Discharger may propose other treatment and disposal alternatives. However, if no other feasible alternative is proposed, then the Discharger must ensure that the Facility ponds fully comply with California Code of Regulations, title 27.

Time Schedule for Pond System

Schedule Date	Task
November 5, 2016	a. Submit a technical report, signed by a California registered civil engineer, describing a Feasibility Study of proposed and preferred alternatives to ensure that receiving groundwater quality objectives are met from any Facility discharges or achieve full compliance with title 27.
November 5, 2017	b. Submit a report, signed by the District's general manager, describing the preferred project alternative that will be implemented and a project planning, design and construction schedule.
April 5, 2018	c. Submit an Initial Study analyzing the potential impacts of the project to satisfy the California Environmental Quality Act (CEQA). Describe how the Discharger will comply with CEQA by either providing a negative declaration or a notice of preparation with the Initial Study. If an Environmental Impact Report (EIR) will be required, prepare the EIR.
November 5, 2018	d. Submit a technical report, signed by a California registered civil engineer, providing the design drawings, specifications, and implementation of construction. Include with this report a revised Report of Waste Discharge (Form 200) describing the change in the manner or method of wastewater treatment and/or disposal.

April 5, 2019	e. Following Water Board's Executive Officer's acceptance of the preferred alternative and compliance with the requirements of CEQA, begin construction. Submit a status report by this date signed by the Discharger's general manager indicating that construction has begun.
November 5, 2020	f. Complete construction of the accepted project. Submit a status report signed by the Discharger's general manager indicating that construction is completed.
April 5, 2021	g. Submit a report signed by a California registered geotechnical engineer describing the As-Built construction plans of the completed project.

Technical reports shall include the signature, stamp, and contact information for the California Registered Civil Engineer acting in responsible charge for the content of the Feasibility Study and construction plans for the proposed project.

If the Discharger decides to line the evaporation/percolation ponds with a synthetic liner, an engineered alternative must justify the alternative meets the California Code of Regulations, title 27, section 20090. Additionally, a liner subgrade preparation plan and liner quality assurance/quality control plan that will be implemented for liner integrity testing must be provided.

I, Patty Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on November 4, 2015.

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

- Attachments:
- A. List of Items for Report of Waste Discharge, Engineering Report, CEQA, and Reference Material
 - B. Facility Location Map – Rosamond CSD
 - C. Facility Features Map Pond System
 - D. Facility Features Map Tertiary Plant
 - E. Groundwater Monitoring Intrawell Analyses
 - F. Standard Provisions for Waste Discharge Requirements
 - G. UV Disinfection System Spot Check Bioassay and Conditions

Attachment A

List of Items for Report of Waste Discharge, Engineering Report, CEQA, and Reference Material

Report of Waste Discharge. Received June 12, 2015

- Form 200 – Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements or NPDES Permit. June 11, 2015.

Title 22 Engineering Report. Received June 12, 2015

- Draft Rules and Regulations Governing the Distribution and Use of Recycled Water
- Rosamond Community Services District Resolution No. 2014-14 A Resolution of the Board of Directors of the Rosamond Community Services District, Implementing Stage 2 of the Ordinance 2009-1, The Water Conservation (No Waste) Program.
- Letter of Intent – Golden Queen Mining Co., Inc. May 29, 2012.
- County of Kern Department of Parks and Recreation. December 3, 2013.
- Rosamond Hills Inc. December 17, 2013.
- Rosamond Community Services District Kern County, CA: Wastewater Treatment Plant Expansion Title 22 Report, February 2003. March 18, 2003.
- Rosamond Community Services District Wastewater Treatment Plant Operations and Maintenance Manual
- Rosamond Community Services District Wastewater Treatment Plant Expansion Kern County, CA, May 2007. February 23, 2006.

CEQA. Received June 12, 2015

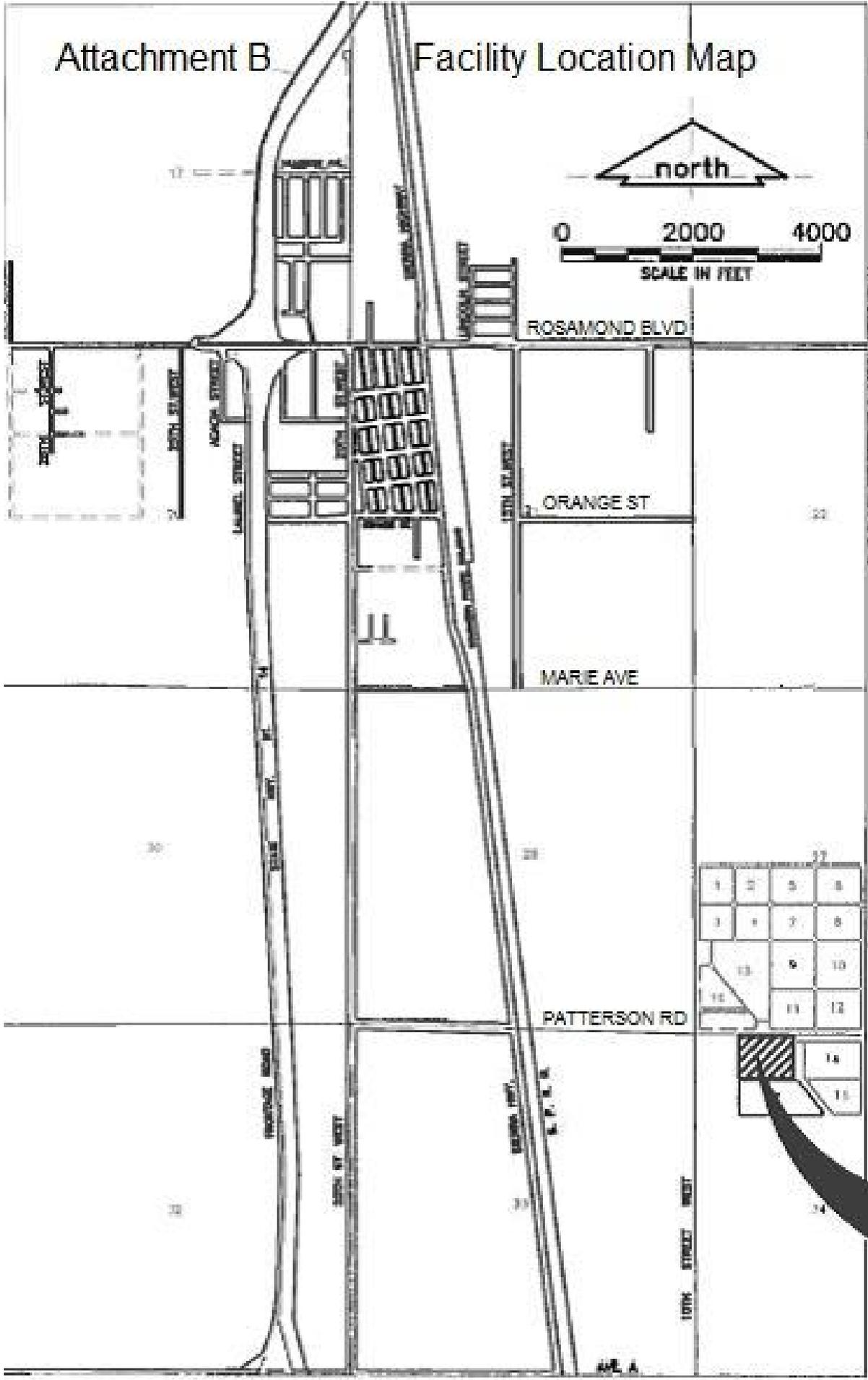
- Mitigated Negative Declaration: Golden Queen Mine Recycled Water Pipeline

Reference Material

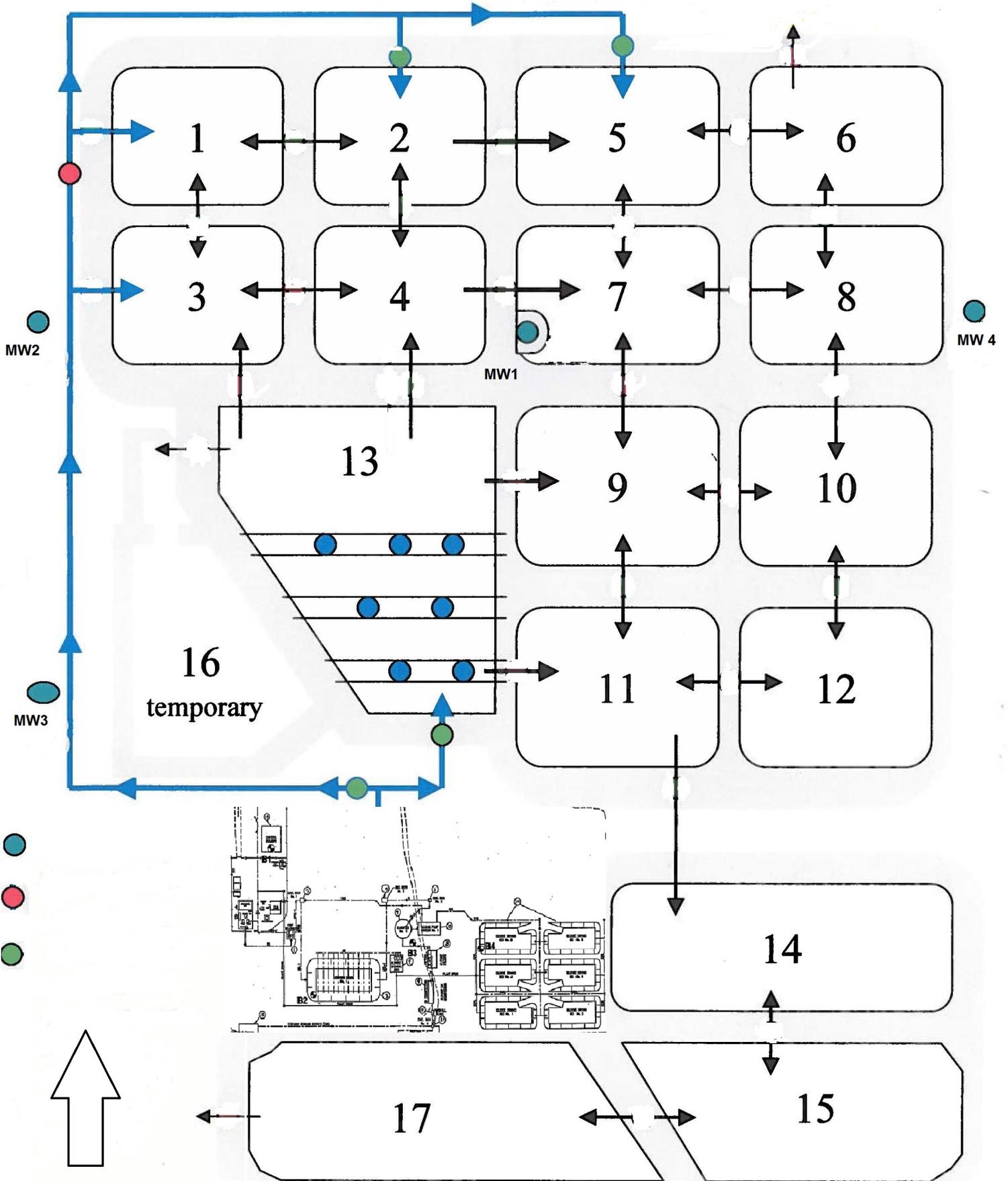
- BSK Associates. Soil and Foundation Investigation Wastewater Treatment Plant Expansion Rosamond Community Service District, Rosamond, CA, September 6, 2001.
- Salt and Nutrient Management Plan for the Antelope Valley (2014).
- Self-Monitoring Reports submitted by Rosamond CSD.

Attachment B

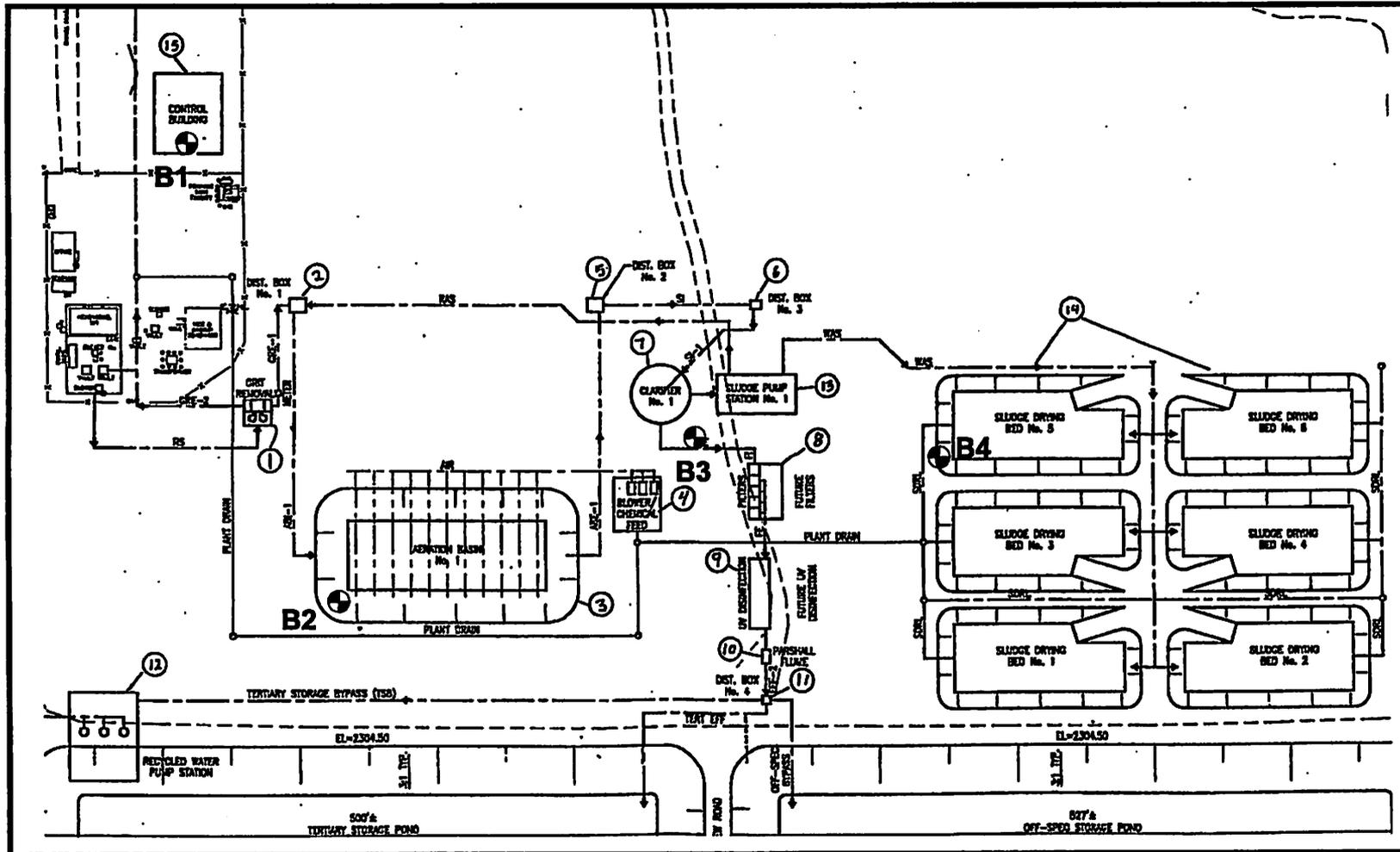
Facility Location Map



ROSAMOND C.S.D TREATMENT PONDS



Attachment D. Facility Features Map Tertiary Plant



Adapted From: Rosamond Community Services District - Wastewater Treatment Plant Expansion - Preliminary Plant Layout, Prepared by Boyle Engineering Corp, File No. S-2135, not dated

BORING LOCATION MAP

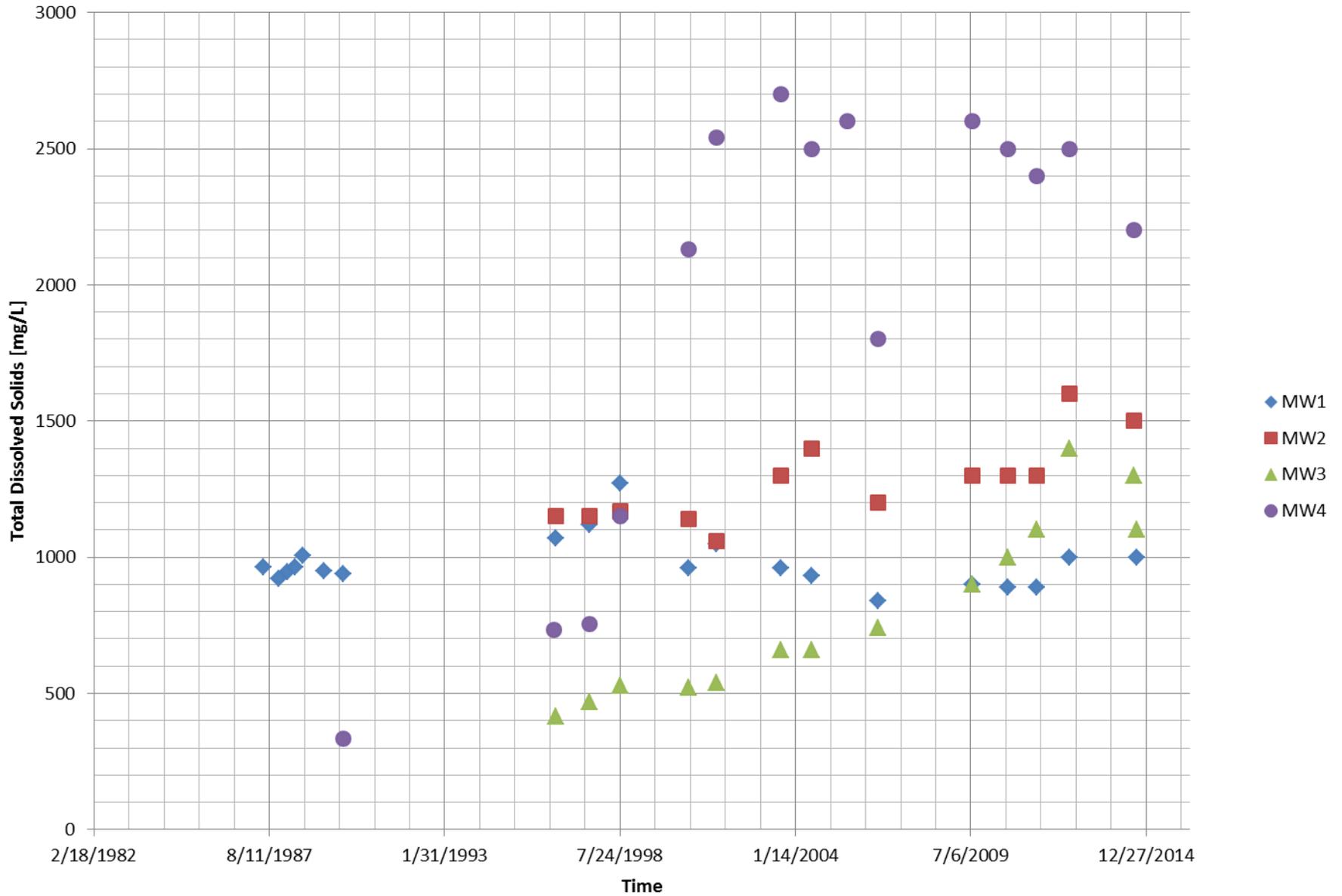
SOIL AND FOUNDATION INVESTIGATION
 ROSAMOND WASTEWATER TREATMENT PLANT EXPANSION
 ROSAMOND CALIFORNIA



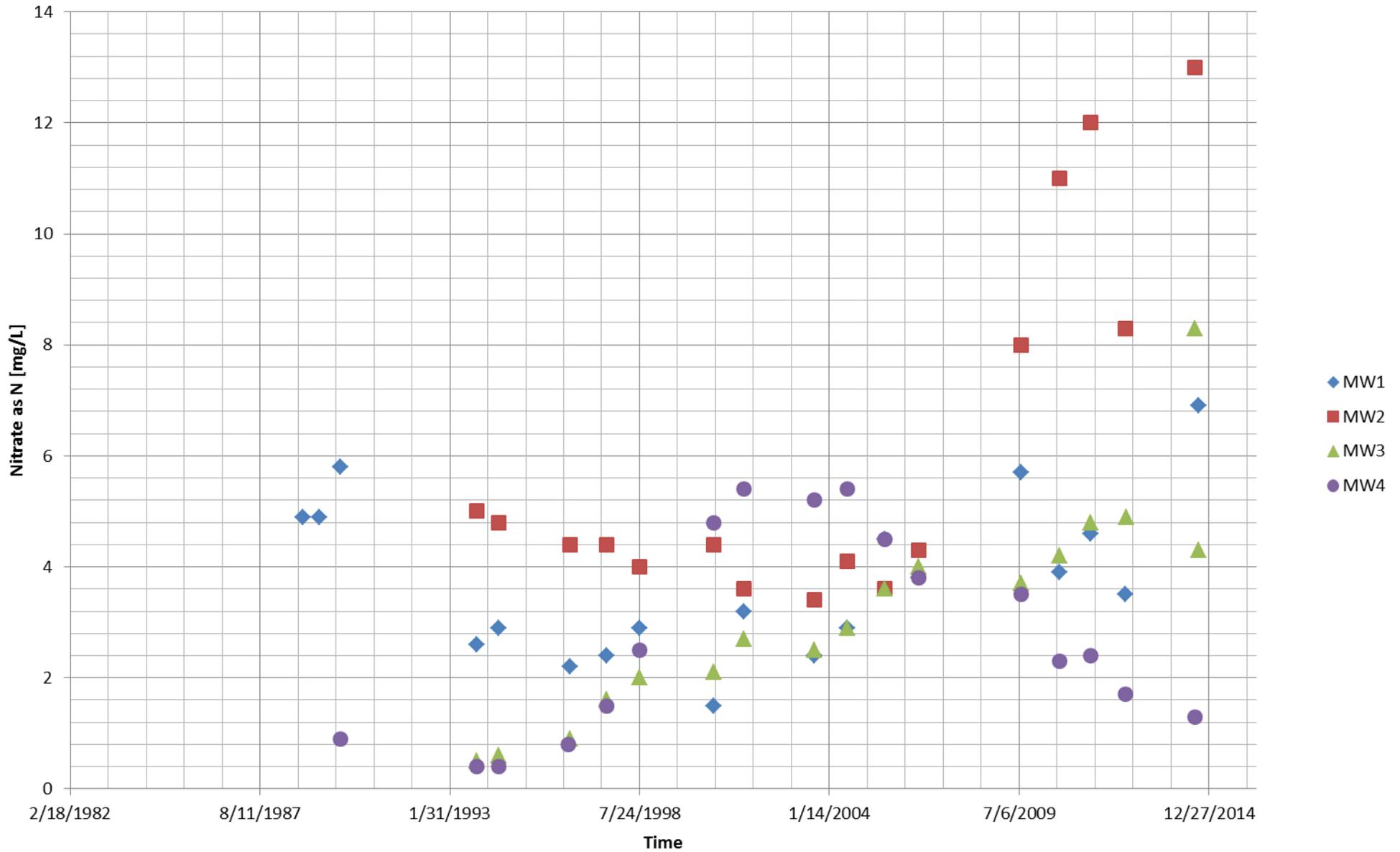
LEGEND

- B1 Number and Approximate Location of Test Boring

Total Dissolved Solids versus Time



Nitrate as Nitrogen versus Time



Attachment F

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

STANDARD PROVISIONS FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.
- f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall 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 WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

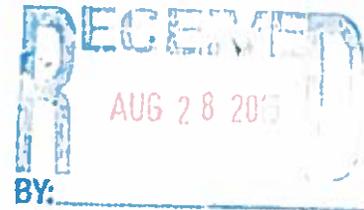
b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.



State Water Resources Control Board
Division of Drinking Water



August 25, 2015

Jehiel Cass, P.E., Senior Water Resource Control Engineer
Lahontan Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392

**UV Disinfection System Spot Check Bioassay and Conditions
Rosamond Community Services District**

The State Water Resources Control Board, Division of Drinking Water (DDW) has reviewed the results from the spot-check bioassay testing of the ultraviolet light (UV) disinfection system at the Rosamond Community Services District Wastewater Treatment Plant (RCSDWWTP). The recycled water UV disinfection system has one channel with four banks (3 active on-line, 1 standby). To verify performance of the RCSDWWTP, UV system at several flows and UVTs, an on-site bioassay using seeded MS2, was conducted. Results, documenting virus disinfection performance of the UV system compared to the standards found in Title 22 of the California Code of Regulations, was submitted to California Department of Public Health (CDPH) for acceptance. The report "Trojan UV3000plus™ Spot-Check Bioassay Report" (Moreland Consulting Engineers, June 2013) contains the bioassay results of the testing on-site at the plant.

For five out of the 10 test runs (50 percent), the dose measured was less than the dose predicted by the Trojan UV dose operating equation, which controls the power and dosage level applied. In order to correct for this underperformance, a site specific factor (SSF) may be added to the Rosamond Trojan UV dose operating equation, which would lower the dose calculated, thereby causing the SCADA control system to increase the power requirement to meet the target dose. A detailed analysis of the raw data and evaluation of the results in light of the National Water Research Institute/American Water Works Association's UV Disinfection Guidelines (2012), indicates that the factor should be 0.81, to be conservative. The report states, "This system should use the second lowest 0.81 SF ratio as part of the control logic."

The following comments are based on the equipment cited and the results in the report. No equivalents or substitutions will be accepted without a demonstration of equivalent disinfection performance. The acceptance of the Rosamond Community Services District WWTP UV system is conditioned on the following criteria, which must be met and/or demonstrated:

1. Since a media filter is used upstream, the Rosamond UV system must be operated to deliver a minimum UV dose of 100 mJ/cm² at all times.
2. The equations below must be used as part of the automatic UV disinfection control system for calculating UV dose and should be specified as a permit provision. A site specific factor of 0.81, is added to the equations from the CDPH July 23, 2009 conditional acceptance

FELISA MARQUEL, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

4825 Commerce Drive, Suite 120, Bakerfield, CA 93309 | www.waterboards.ca.gov

letter, entitled "Revised Conditional Acceptance Of Trojan UV3000plus™ Disinfection System, Correction Factor For 2005 Bioassay":

$$\text{Dose} = (\text{SSF}) * (\text{CF}) * (\text{FF}) * (\text{EOLL}) * 10^{-4.63 - 0.7 * \log \text{Flow} + 2.91 * \log \text{UVT} + 1.09 * \log P}$$

And

$$\text{CF} = -0.003 \times \text{UVT} + 1.075 \quad (\text{correction factor to the 2005 bioassay})$$

Where:

Dose = Delivered UV dose per bank (mJ/cm²);

SSF = 0.81 site specific factor

FF = 0.95 Fouling Factor based upon a cleaning frequency of once every 12 hours

UVT = % UV transmittance at 254 nm (%);

Flow = Flow rate per lamp [gallons per minute (gpm)/lamp], with gpm/lamp calculated as gpm divided by the number of lamps in one bank;

EOLL = End of Lamp Life factor = 0.98 at 9000 hours for the Heraeus lamp

P = percent power

3. The UV disinfection system reactor is limited to the following operational parameter ranges:
 - a. Permit flow up to 0.77 MGD.
 - b. UVTs at or above 55 percent,
 - c. The UV lamps are maintained below the maximum value of 9,000 hours of operation.
4. To maintain a Fouling Factor of 0.95, clean/wipe the quartz sleeves once every twelve hours.
5. Flow meters and UVT monitors must be properly calibrated to ensure proper disinfection.
6. UVT meter must be inspected and checked against a reference bench-top unit weekly to document accuracy.
7. If the on-line analyzer UVT reading varies from the bench-top spectrophotometer UVT reading by 2% or more, the on-line UVT analyzer must be recalibrated by a procedure recommended by the manufacturer.
8. Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods.

9. The facility should be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan should be submitted and approved prior to issuance of the operating permit. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies. A quick reference plant operations data sheet should be posted at the treatment plant and include the following information:
 - a. The alarm set points for secondary and tertiary turbidity, high and low flow, UV dose and transmittance, UV lamp operation hours, and power.
 - b. The values of secondary and tertiary turbidity, high and low flow, UV dose and transmittance, UV lamp operation hours, and power when flow must be diverted to waste.
 - c. The values of high daily and weekly median total coliform when flow must be diverted to waste.
 - d. The required frequency of calibration for all meters measuring turbidity, flow, UV transmittance, and power.
 - e. The required frequency of mechanical cleaning/wiping and equipment inspection.
 - f. The UV lamp age tracking procedures and replacement intervals.
10. The Trojan UV3000Plus™ UV systems must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. If the measured UV dose goes below the minimum UV dose, the UV reactor in question must alarm and startup the next available UV lamp bank or reactor.
11. Conditions that should shut a reactor down and divert flow include: inability to meet the target dose, high flow, low UVT, or reactor failure.
12. Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance.
13. These applicable recommendations should be incorporated into the final permit for the Rosamond UV system. Approval for the use of any and all water recycling applications is granted through the Regional Water Quality Control Board's Water Reclamation permitting process.

These applicable conditions should be incorporated into the Regional Water Quality Control Board permit. Should you have any questions regarding the content of this letter, please feel free to contact Brian Bernados at (brian.bernados@waterboards.ca.gov; 619.525.4497) or Randy Bamard (randy.bamard@waterboards.ca.gov; 619.525.4022).

Sincerely,



Jaswinder S. Dhaliwal, P.E.
Senior Sanitary Engineer, Tehachapi District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

CC: Kern County Environmental Health Services Department
Rosamond Community Services District
3179 35th Street West
Rosamond, CA 93560

Lorena Ospina, GEI Consulting Engineers (via email)

(JSD/BB)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MONITORING AND REPORTING PROGRAM R6V-2015-(PROPOSED)
WDID NO. 6B150112001**

FOR

**ROSAMOND COMMUNITY SERVICES DISTRICT
DOMESTIC WASTEWATER TREATMENT FACILITY / RECLAMATION PLANT**

_____ Kern County _____

I. GENERAL REQUIREMENTS

A. Effective Date

This Monitoring and Reporting Program (MRP) is being required pursuant to Water Code section 13267 and is effective on the date as specified by the Water Board's Executive Officer.

B. Overview of Reports Required

Sampling and Reporting Frequency	Quarterly Period	Report Date Due
Quarterly Monitoring Reports	Are due on the first day of the month following that quarter	April 1, July 1, October 1, and January 1
Annual Report	January 1 – December 31	March 1 of each year

Each quarterly report must provide information on: (1) general operations, (2) operational problems, (3) compliance assessment, and (4) data for constituents as specified below.

C. Report Submittal

All reports required by this MRP must be submitted electronically to the following email address: Lahontan@waterboards.ca.gov. The Facility name (Rosamond CSD) and WDID No. (6B150112001) must be included in the subject line. This includes the narrative, graphical and tabular information relating to facility compliance and groundwater monitoring. Include a statement with this submittal indicating what groundwater data, if any, was uploaded to Geotracker.

D. Geotracker

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all groundwater data required under the MRP in Electronic Data Format (EDF) to the State Board's Geotracker database. This includes monitoring locational data (latitude and longitude) and searchable PDF

monitoring reports. The Geotracker database Global ID No. (**To Be Assigned When Geotracker Site Created**) may be accessed at:
<http://geotracker.waterboards.ca.gov>.

The following information data must be uploaded one-time.

1. Boring Logs and Well Screen Intervals: Boring logs must be prepared by an appropriate registered professional and need to be submitted in PDF format. If a monitoring well is installed, the screen depth and interval must be reported.
2. Locational Data: Permanent groundwater sampling locations must be surveyed by a California registered surveyor. The surveyed locational information for these sampling points must be submitted using the Geo_XY file.
3. Site Map: An electronic site plan map must be submitted into the GEO_MAP file and display site features, pond location, adjacent streets, and sampling locations for all groundwater samples. The site map is a stand-alone document that may be submitted in various formats. Updated site maps must be submitted when site conditions change.

The following information data must be uploaded each time a well is sampled.

4. Lab Data: Analytical data (including geochemical data) for all groundwater samples that are collected for the purpose of subsurface investigation or remediation must be submitted in specified EDF format.
5. Depth to Water Data: Monitoring wells need to have the depth-to-water information reported in the GEO_WELL file whenever the data is collected, even if the well is not actually sampled during the sampling event.
6. Elevation Data: Groundwater elevation measurements (as related to the top of groundwater well casing elevation) must be reported as elevation above mean sea level and submitted as part of the GEO_Z file).

E. General Provisions

The Discharger must comply with the "General Provisions for Monitoring and Reporting" dated September 1, 1994, which is made part of this Monitoring and Reporting Program as Attachment A.

F. Reports

1. All analytical data must be placed in tabular data summary tables for influent, effluent, and groundwater quality.

2. All original data sheets from an analytical laboratory data must be included in the monitoring report.
3. The Discharger must use Attachment B as a cover letter for all reports provided to the Water Board associated with this MRP.
4. Where additional data are collected above minimum reporting requirements, that additional data shall be reported.
5. Graphs shall be used where appropriate to illustrate trends (e.g. effluent and groundwater results).
6. Reports containing groundwater data must make a specific assessment as to whether any data indicate a violation of receiving water quality objectives.
7. Monitoring reports must make a specific assessment as to whether any violation occurred with respect to order conditions. All effluent or receiving water quality objective violations must be stated in the cover letter of each monitoring report.
8. Sample results greater than or equal to the laboratory's reporting level (RL) must be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample). Sample results less than the reported RL, but greater than or equal to the laboratory's Method Detection Limit (MDL), must be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample must also be reported using an appropriate data qualifier (e.g. "J" flag).

II. QUARTERLY MONITORING

Each report must include the information specified below.

A. Facility Flow/Pond/Operations Monitoring

The following data must be recorded in a permanent logbook and the information submitted according to the frequency listed:

1. The total volume of wastewater flowing into the Facility for each day, in million gallons (MG) as measured at the head works.
2. The total volume, in MG, of flow delivered directly to the oxidation/evaporation ponds for each day and month as measured at flow meter 10FIT-211.
3. The total volume, in MG, of effluent flow treated at the tertiary treatment plant for each day and month as measured/calculated from the flow meter readings.

4. The calculated average daily flow rate, in million gallons per day (MGD), of domestic wastewater into the Facility calculated for each month.
5. The calculated average flow rate, in MGD of flow to the oxidation/evaporation ponds for each month.
6. The calculated average flow rate, in MGD of effluent flow from the tertiary treatment plant calculated for each month.
7. The maximum daily flow into the Facility per month.
8. Reports of monthly visual inspections of the Facility, including but not limited to, the liner integrity of the aeration basin, and other issues related to facility compliance.
9. Monthly freeboard measurements from each pond and aeration basin. Provide the measurement to the nearest quarter ($\frac{1}{4}$) of a foot. Each pond or basin shall have a surveyed reference marker installed.
10. A report of any operational problems and maintenance activities affecting effluent discharges or compliance with waste discharge requirements, and proposed corrective measures, if needed, and a schedule for completion.

B. Influent Monitoring

Influent samples taken prior to the tertiary treatment plant and oxidation/evaporation ponds must be analyzed to determine the magnitude of the parameters listed in the table below.

Influent Monitoring

<u>Parameter</u> ¹	<u>Units</u>	<u>Frequency</u>
Electrical conductivity	µS/cm	Weekly
pH	pH units	Weekly
Dissolved Oxygen	mg/L	Weekly

¹Field test accomplished by site personnel with a direct read instrument calibrated per manufacturer's specifications.

C. Septage Monitoring

Septage waste accepted at the facility shall be monitored as follows.

1. Name of the hauler for each load accepted.
2. Volume of septage discharged from each load.
3. Load out point (if different than pond 3).

4. For each load, report the parameters listed in the table below.

Septage Field Measurements

<u>Parameter</u> ¹	<u>Units</u>	<u>Frequency</u>
Electrical conductivity	µS/cm	Per Load
pH	pH units	Per Load
Dissolved Oxygen	mg/L	Per Load

¹Field test accomplished by site personnel with a direct read instrument calibrated per manufacturer's specifications.

D. Effluent Monitoring (Disinfected Tertiary-Treated Wastewater)

Samples of disinfected tertiary-treated wastewater must be collected from the tertiary treatment plant and analyzed to determine the magnitude of the parameters listed in the table below.

Tertiary Plant Effluent Monitoring

Constituent	Units	Method	Sample Type	Frequency ¹
Biochemical Oxygen Demand (BOD)	mg/L	SM5210B	8-hour Composite	2 times/month
Total Suspended Solids (TSS)	mg/L	SM2540D	8-hour Composite	2 times/month
Ammonia-N	mg/L	SM4500NH3G	8-hour composite	1 time/month
Nitrate-N	mg/L	300	8-hour composite	1 time/month
Nitrite-N	mg/L	SM4500NO2B	8-hour composite	1 time/month
Total Kjeldahl Nitrogen	mg/L	351.2	8-hour composite	1 time/month
Total Nitrogen	mg/L	NA	Calculated value	1 time/month
Total Dissolved Solids (TDS)	mg/L	SM2540C	8-hour composite	1 time/month
pH	Units	NA	Grab	1 time/month-field
Methyl Blue Active Substances	mg/L	SM5540 C	Grab	1 time/month

¹Field test accomplished by site personnel with a direct read instrument calibrated per manufacturer's specifications.

E. Pond Monitoring

The last stabilization/evaporation pond to contain water in each treatment/flow train containing water (typically two for the pond system) must have water content sampled and analyzed for the following constituents. The pond number and date of sampling must be reported as described in the table below.

Stabilization Pond Monitoring

Constituent	Units	Sample type	Frequency
Total Nitrogen	mg/L	Grab	Quarterly
Dissolved Oxygen ¹	mg/L	Grab	Quarterly
Electrical Conductivity ¹	µmho/cm	Grab	Quarterly

¹ Field test accomplished by site personnel with a direct read instrument calibrated per manufacturer's specifications. All samples other than field measurements must be conducted by a laboratory certified in California and following either an EPA method or accepted standard method.

F. Recycled Water Production Monitoring

Representative samples of recycled water quality shall be collected and analyzed after disinfection for the parameters listed in the table below.

Recycled Water Monitoring

Station	Units	Parameter	Method	Type	Frequency
Final Effluent Station	NTU	Turbidity	EPA 180 – field	Continuous	Daily
Final Effluent Station	MPN/100mL	Total Coliform	SM 9221	Grab	Daily
Final Effluent Station	mJ/cm2	UV Dose	SCADA ¹	Continuous	Daily
Recycled Water Pump Station	gallons	Delivered Flow	SCADA ¹	Continuous	monthly total

¹SCADA = Supervisory Control and Data Acquisition system used to automatically monitor and adjust plant performance and control

G. Groundwater Monitoring

1. Groundwater samples must be obtained from the existing four monitoring wells and any newly installed wells and the samples analyzed to determine the magnitude of the parameters listed in the table below. The additional new wells required by this order shall be sampled quarterly for the first 8 sampling events. After that they can be sampled on a semiannual basis.

Groundwater Sampling

Parameters	Units	Frequency
Total Dissolved Solids	mg/L	Semi-annually
Chloride	mg/L	Semi-annually
Sulfate	mg/L	Semi-annually
Nitrate-N	mg/L as N	Semi-annually
Ammonia Nitrogen	mg/L as N	Semi-annually
Total Kjeldahl Nitrogen	mg/L as N	Semi-annually
Methylene Blue Active	mg/L	Semi-annually

Parameters	Units	Frequency
Substances		
Nitrite	mg/L	Semi-annually
Total Nitrogen	mg/L	Semi-annually

- Field parameters, as described in the table below, must be determined in each monitoring well each time it is sampled as part of well purging and the final results reported.

Groundwater Field Measurements

Parameters	Units
Static water depth	Feet bgs
Electrical conductivity	µS/cm
pH	pH units
Temperature	Degrees C
Dissolved Oxygen	mg/L
Turbidity	NTU
Color	Visual

- Monitoring reports must include a map showing well locations, groundwater elevation contours with respect to mean sea level, groundwater flow direction and gradient.
- Monitoring reports must describe the well purging methods. Low flow well purging techniques are recommended. See for example: *Representative Sampling of Groundwater for Hazardous Substances, Guidance Manual for Groundwater Investigations, July 1995, revised June 2006, CA Department of Toxic Substances Control.*

H. Biosolids Monitoring

The following must be recorded monthly and reported in the quarterly monitoring reports.

- Total quantity of sludge deposited to the biosolids drying beds per month.
- Date and quantity of biosolids removed off site, location of use, recipient (including name and address) and biosolids reuse or disposal method.
- The number of the drying bed containing biosolids. Indicate if a bed is empty.

III. ANNUAL MONITORING REPORT

The Annual Report covers the period from January 1 through December 31 of the previous calendar year and must, as a minimum, include the following.

- A. Graphs (groundwater table elevation versus time) showing long-term trends of groundwater table elevations for each groundwater monitoring well.
- B. Facility site map showing: treatment plant components and structures, property boundary lines, groundwater monitoring wells, sludge drying beds, elevation of groundwater table and land surface at each well and groundwater equipotential lines.
- C. Graphical and tabular presentation of all historical groundwater monitoring data in tabular spread sheet format.
- D. Graphs (concentration versus time) showing long-term trends in concentrations of the following constituents in the tertiary treatment plant effluent: biochemical oxygen demand (BOD), Nitrate, Kjeldahl Nitrogen, Ammonia and TDS.
- E. The compliance record and corrective actions taken or planned that may be needed to bring the Discharger into full compliance with the waste discharge requirements.
- F. Any modification or additions to, or any major maintenance conducted on, the wastewater flow measuring equipment, treatment or disposal facilities during the past year. If no actions were taken, then that also must be stated.
- G. Analysis of groundwater quality trends by comparing upgradient and downgradient monitoring well data, intra-well statistical analysis, inter-well statistical analysis or other method as accepted by the Water Board's Executive Officer.
- H. Names and grades of all the certified operators.
- I. For groundwater data, complete a trend analyses after 8 samples from new wells are installed (See for example the EPA Unified Guidance and Sanitas® software where the Mann-Kendall test is recommend) to establish appropriate samples to be used in calculation of a backgrounded. Then appropriate samples should be used to determine background. Submit calculated background results in the first monitoring report after the eight samples are collected. In subsequent monitoring reports, provide a comparison of the groundwater constituent concentrations to background.

IV. SAMPLING AND ANALYSIS PLAN

By **January 15, 2016**, pursuant to General Provision No. 1.d. of the General Provisions for Monitoring and Reporting, submit a Sampling and Analysis Plan (SAP). A copy of

the SAP must be maintained at the Facility and available for inspection. The SAP must include a detailed description of procedures and techniques for:

- A. Sample collection and handling procedures, sample locations, sampling equipment, and decontamination of sampling equipment.
- B. Groundwater well purging methods and sample collection methods.
- C. Sample preservation and shipment methods.
- D. Analytical methods and procedures.
- E. Chain of custody control.
- F. Quality assurance/quality control (QA/QC) methods.
- G. Frequency of calibration of any onsite equipment (pH meter, electrical conductivity meter, flow meter).
- H. Description of how onsite measurements are done.

V. TIME SCHEDULE FOR NEW MONITORING WELLS

Pursuant to the California Water Code, section 13267, the Discharger must submit to the Lahontan Water Board, a work plan for the installation of additional groundwater monitoring wells to cover the footprint of the entire treatment plant and to determine the nature and extent of polluted groundwater at the Facility. At a minimum, wells should be installed along the perimeter of the Facility to define the extent of pollution, and one in a location representing background water quality.

After acceptance of the work plan by the Water Board’s Executive Officer, the wells should be installed according to the schedule described in the table below.

Groundwater Monitoring Wells

Schedule Date	Task
March 15, 2016	a. Submit a work plan for the Executive Officer’s acceptance as described in section V.A, below, proposing construction of additional groundwater monitoring wells to provide for compliance monitoring at the Facility and establish the nature and extent of groundwater pollution at the Facility.
March 15, 2017	b. Complete monitoring well installation.
June 15, 2017	c. Submit a well completion report as described in section V.b. below, including the CA Department of Water Resources Well Drillers Report

Additional wells for the entire footprint of the Facility need to be incorporated into the groundwater contour map describing groundwater flow direction and gradient. Analyses

should be included in the quarterly report after completion describing the nature and extent of the existing groundwater pollution.

Monitoring wells must establish “first encountered groundwater” (background \ existing water quality).

Trend analyses must be performed annually for TDS and nitrate as nitrogen in all monitoring wells to determine whether concentrations are increasing. Increasing, stable or decreasing trends in groundwater monitoring data must be explained according to EPA Unified Guidance.

The background well must be identified based on 8 or 10 sampling events. The general guidelines for calculating background\existing quality must be equal to the upper 99% confidence interval for the first eight nitrate samples (minimum sample size) collected from the well.

Calculation of water quality must be accomplished in the two instances described in the table below. The results must be included as specified.

Calculation of Groundwater Quality

March 15, 2016	Calculate existing water quality from the four existing wells. Include the results in the work plan for establishing new wells.
March 1, 2019	Calculate water quality from the new wells and re-calculate water quality from the existing wells. Include the results in the Annual Report.

The analysis will incorporate the newly installed wells by comparing up-gradient and down-gradient monitoring well data, intra-well statistical analysis, inter-well statistical analysis or other method appropriate method.

- A. The work plan must propose how to establish compliance monitoring for the entire footprint of the oxidation/evaporation/stabilization ponds and the plant. Additional wells beyond the four existing wells are needed to evaluate the nature and extent of groundwater pollution at the Facility. The wells must be demonstrated to comply with California Well Standards, CA Department of Water Resources Bulletins 74-81 and 74-90. All appropriate Kern County well permits must be obtained. Wells shall be completed in the first encountered groundwater. The work plan shall be signed by a California Registered Civil Engineer or Geologist and specify the following.
 - 1. Well locations,
 - 2. Well design,
 - 3. Well casing diameter and material,
 - 4. Proposed well screen interval and slot size,
 - 5. Drilling method,
 - 6. Waste handling and disposal,
 - 7. Well develop method,

8. Well sample purging methods,
9. Well sampling procedures,
10. Initial water quality constituent analyses to include all general minerals, including nitrate, and metals, and
11. Plan to collect a sufficient number of samples to existing groundwater quality.

B. The well completion report must be submitted as follows.

1. Signature by a California registered civil engineer or geologist indicating that well installation was completed per the proposed plan, or any deviations thereof,
2. Well Completion Report filed with the CA Department of Water Resources in accordance with Water Code, section 13750 et seq. (*Form# DWR 188 REV. 11-97*),
3. Initial water quality sample results, including field data,
4. Well survey completed and signed by a CA registered surveyor indicating the location coordinate locations, top of casing elevations and top and bottom of well screen elevations,
5. Copies of Kern County well permits per California Water Code, section 13751, and
6. A map showing the location of all monitoring wells at the site along with other plant site features including: head works, land ownership boundaries, oxidation ponds, sludge drying beds, and the tertiary plant.

Ordered by: _____

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Dated: November 4, 2015

- Attachments:
- A. General Provisions for Monitoring and Reporting, dated September 1, 1994
 - B. Cover Form for Monitoring Reports

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. **SAMPLING AND ANALYSIS**

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
 - i. Name and telephone number of individual who can answer questions about the report.
 - ii. The Monitoring and Reporting Program Number.
 - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

x:PROVISIONS WDRS

file: general pro mrp

Date _____

California Regional Water Quality Control Board
Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

Facility Name:

Address:

Contact Person:

Job Title:

Phone:

Email:

WDR/NPDES Order Number:

WDID Number:

Type of Report (circle one):

Monthly Quarterly Semi-Annual Annual Other

Month(s) (circle applicable month(s)*:

JAN FEB MAR APR MAY JUN
JUL AUG SEP OCT NOV DEC

*annual Reports (circle the first month of the reporting period)

Year:

Violation(s)? (Please check one): _____ **NO** _____ **YES***

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation:

**b) Section(s) of WDRs/NPDES
Permit Violated:**

c) Reported Value(s) or Volume: _____

d) WDRs/NPDES
Limit/Condition: _____

e) Date(s) and Duration of
Violation(s): _____

f) Explanation of Cause(s): _____

g) Corrective Action(s)
(Specify actions taken and a schedule
for actions to be taken)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact _____ at the number provided above.

Sincerely,

Signature: _____

Name: _____

Title: _____

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ENCLOSURE 2

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Hurr, Cephas@Waterboards

From: Ospina, Lorena <lospina@geiconsultants.com>
Sent: Wednesday, September 16, 2015 2:15 PM
To: Lahontan
Cc: Cass, Jehiel@Waterboards; Hurr, Cephas@Waterboards; rsmith@rosamondcsd.com; 'jhoughton@rosamondcsd.com (jhoughton@rosamondcsd.com)'; Lizette Guerrero; randerson@geiconsultants.com
Subject: RE: TENTATAIVE REVISED WDRS FOR ROSAMOND CSD - DOMESTIC WASTEWATER TREATMENT / RECLAMATION PLANT
Attachments: RCSD - comments Draft WDR R6V-2015_Tentative.pdf
Importance: High

Good Afternoon Rebecca,

In response to Lahontan RWQCB's letter dated September 4, 2015, regarding the subject Tentative Revised WDR RCSD has reviewed and provided comments. Comments are being submitted prior to the October 4, 2015 deadline, as requested. Enclosed you will find a pdf which includes the draft WDR with comments, the comments in table format, and supporting figures. Figure 1 is being presented to establish the general location of the RWWTP in relation to the location of the Rosamond Dry Lake. This is being presented to facilitate the discussion regarding potential sources of influence and potential wq impacts. Figure 2 illustrates the location of RWWTP in relation to one of the nearby water supply wells. Also noted in this figure is the general groundwater flow direction and wq result for the well.

Overall, RCSD supports the need for a more robust monitoring effort. That said, there should be clear identification of pollution influences prior to finalizing the remediation. The biggest concern lies with the potential for remediation to proceed as noted within the WDR without resolution due outside influences.

We are open to discuss the attached and are available at your request.

Thank you in advance for your time and consideration.
Lorena

Lorena Ospina
Senior Consultant



GEI Consultants, Inc.
101 N. Brand Boulevard, Suite 1780 | Glendale, CA 91203
T: 818.552.6412 M: 949.400.0629 F: 818.552.6401

www.geiconsultants.com | [vCard](#) | [map](#) | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

From: Phillips, Rebecca@Waterboards [<mailto:rebecca.phillips@waterboards.ca.gov>] **On Behalf Of** Lahontan
Sent: Friday, September 04, 2015 1:07 PM
To: jhoughton@rosamondcsd.com; Foolad, Hamid@Waterboards; Ortiz, Aide@Waterboards; Ospina, Lorena; Wildlife R4 Manager Secretary; scottd@co.kern.ca.us; Dhaliwal, Jesse@Waterboards; Pierotti, Bob@DWR; Hurr,

Comment #	Page	Section	Comment	Response/Question
1	1	2a	"recreational users"	Is the term specific to parks that irrigate or is it irrigation of things in general such as medians and schools?
2	1	2b	"the pond system has contributed to receiving groundwater pollution....."	Has this really been established? Based on the water quality results obtained to date, there seems to be concern over well 02 (nitrate) and well 04 (tds) wq levels. There should be further data available or an plan established to determine the source and extent of influence contributing to these elevated levels, which will aid in developing a proper response to groundwater pollution. (i.e. whether this is rehabilitation of the lining or determining that pollution is from off-site.)
3	2	2d	The Monitoring and Reporting Program requires additional wells to be installed to evaluate the nature and extent of groundwater pollution at the Facility	There is agreement that the Monitoring Program should be more robust to fully understand the extent of groundwater pollution. That said, please refer to comment 2 to confirm if the Facility is the actualized contributor of said pollution.
4	3	6	Geology	The well logs obtained directly from California Department of Water Resources identify the soil characteristics as layers of clay not sand, which is in conflict with the language provided in the BSK report. RCS D requests a copy of the 2007 report for our review to determine if samples obtained for this report are representative of conditions at the site.
5	3	7a	Approximately 1.3 million gallons per day (mgd in 2014) of untreated wastewater influent....	Influent flows are not consistent and vary from 1.0 to 1.3 MGD. Recommendation to change language to reflect variations of inflows or change "up to" instead of "approximately".
5	4	7b	Any potential on-site clay liner material would have a questionable clay fraction, even if large fractions of sand were separated to produce an on-site clay liner	See Comment 4. Statement regarding geology is inconsistent and again refers back to BSK. We would like a copy of the report to determine where samples were taken.
6	6	10	Quality of Groundwater and Influent Wastewater Table	Recommendation that there be further evaluation on the wells that are upgradient to evaluate the impact of upgradient wq
7	7	13	This Order establishes a Time Schedule for the Discharger to propose and implement a treatment and disposal plan that will remedy the existing unauthorized discharge and prevent further pollution	Premature to assume pollution exists as a result of the evap ponds. We are not saying the are not the source but are not certain that is the potential sole contributor
8	8	16b	California Code of Regulations, Title 27	Be aware of this requirement, however meeting Title 27 may be feasible if it established that wq impacts are related to other sources.
9	10	19a	Basis for Effluent Limitations	We need to better establish upgradient/downgradient WQ. Proposed Question: If the ponds are compromised, why do upgradient wells demonstrate increases in TDS/Nitrate but no variations in wq are noted in the downgradient wells?
10	12	23	The nearest water supply well [State Well No. 1500485-001] is located about 1.1 miles to the southwest of the Facility.	The well that is noted here is not the closest well to the Facility. There are wells directly west that are less than a mile from the ponds and these wells are upgradient. This well referenced in the Draft WDR is upgradient to the pond system, and as such would not be influenced by any changes in wq resulting from leakage.

11	13	23	the Water Board may require in a separate order that the Discharger clean up and abate the impacts to the groundwater	Do we have enough data to make this determination?
12	14	27	II. Discharge Limitations	See previous comments.
13	19	27	VII. Time Schedule for Pond System	Assuming the ponds need to be relined due to demonstrated infiltration of the groundwater

Figure 1: Rosamond WWTP Facility Regional Location

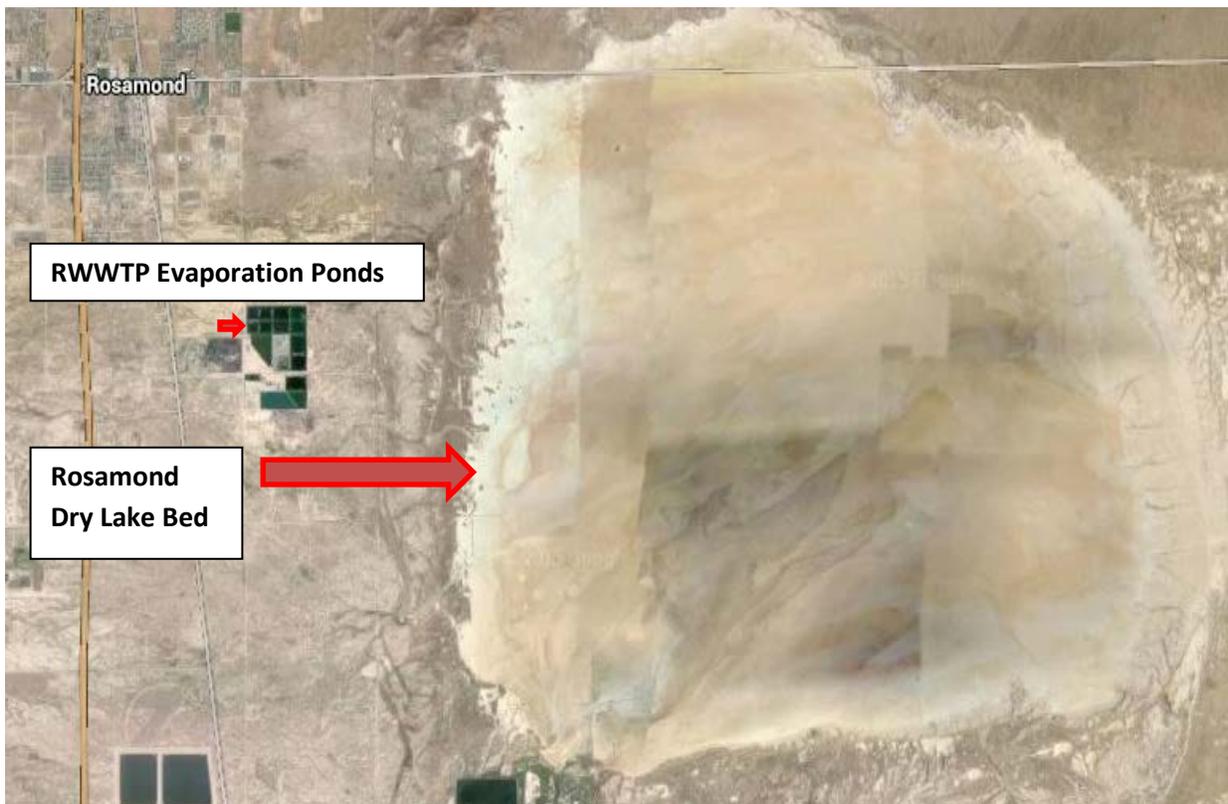
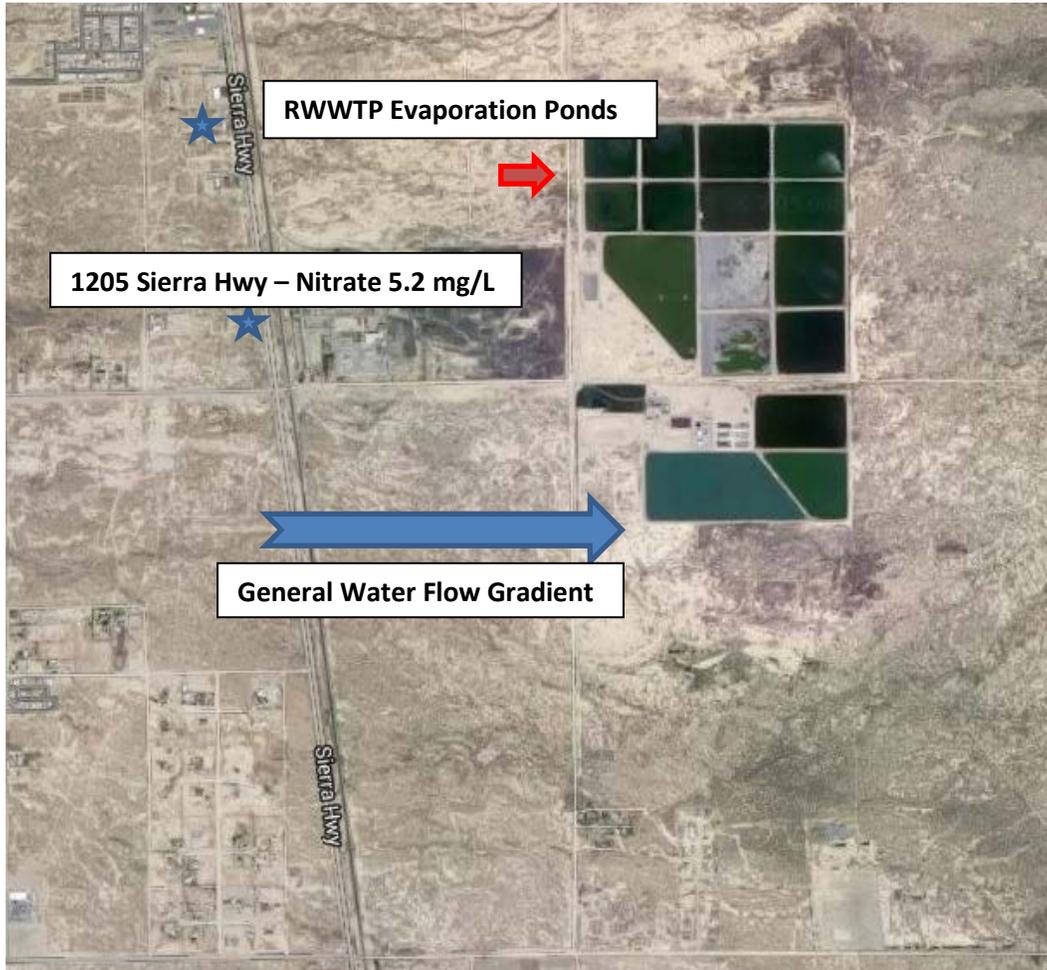


Figure 2: RWWTP Facilities and Wells near the Site



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ENCLOSURE 3

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Lahontan Regional Water Quality Control Board

October 13, 2015

Ron Smith, General Manager
Rosamond Community Services District
3179 35th Street West
Rosamond, CA 93560
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WDID NO: 6B150112001

**RESPONSE TO COMMENTS - TENTATIVE WASTE DISCHARGE REQUIREMENTS
R6V-2015-XXXX, ROSAMOND COMMUNITY SERVICES DISTRICT WASTEWATER
TREATMENT PLANT, ROSAMOND, KERN COUNTY**

This letter provides Water Board staff responses to the Rosamond Community Services District (District) comments dated September 16, 2015 provided by its consultant, GEI Consultants via email. We appreciate the District's comments on the Tentative Waste Discharge Requirements Order and our responses are provided in the enclosed table (Enclosure). We propose to make a few changes to address some of your concerns.

We understand from your comments and in speaking to you on September 28, 2014, that the District's major concerns are uncertainty regarding the following issues addressed in the Tentative Order.

- (1) Confirmation that the existing pond system has caused groundwater pollution,
- (2) Direction of localized groundwater flow, and
- (3) Uncertainty that operational treatment and disposal changes in the pond system are necessary.

Separately, you will receive the Proposed Order which will be on the November 2015 agenda which you may review at http://www.waterboards.ca.gov/board_info/calendar/.

Please send all future correspondence on this issue to our paperless email address at Lahontan@waterboards.ca.gov. If you have any questions please contact me at (760) 241-3408, Cephas.hurr@waterboards.ca.gov, or Jehiel Cass, P.E, at (760) 241-2434, jehiel.cass@waterboards.ca.gov.



Cephas Hurr
Water Resources Control Engineer

cc: Lorena Ospina, GEI Consultants, Inc., lospina@geiconsultants.com
Ella Estasy, Division of Drinking Water, Ella.Estasy@waterboards.ca.gov
Jesse Dhaliwal, Division of Drinking Water, Jesse.Dhaliwal@waterboards.ca.gov

cc w/enc: Water Board staff responses to GEI Consultants, September 16, 2015

R6V-2015-xxxIResponse to Comments on TENT MP

Enclosure 1: Water Board Staff Responses to GEI Consultant Comments on Tentative Waste Discharge Requirements for Rosamond Community Services District Wastewater Treatment/ Reclamation Plant. September 16, 2015

#	Page	Section	Statement	Comments	Water Board Response
1	1	2a	"recreational users"	Is the term specific to parks that irrigate or is it irrigation of things in general such as medians and schools?	Response: The term can refer to parks, medians and schools. Change: Finding no. 2.a. was modified to add language clarifying that other recycled water uses are allowed that satisfy Title 22 water recycling criteria.
2	1	2b	"the pond system has contributed to receiving groundwater pollution..."	Has this really been established? Based on the water quality results obtained to date, there seems to be concern over well 02 (nitrate) and well 04 (tds) wq levels. There should be further data available or an plan established to determine the source and extent of influence contributing to these elevated levels, which will aid in developing a proper response to groundwater pollution. (i.e. whether this is rehabilitation of the lining or determining that pollution is from off-site.)	Response: Addressing the District's first concern. The groundwater pollution is not likely from an off site source. Monitoring well [MW]2 contains a nitrate-nitrogen concentration of 13 mg/L and [MW]4 contains a total dissolved solids concentration of 2,200 mg/L, both exceeding the receiving water quality objective for these constituents. There is no data from other wells in the area that have higher concentration of nitrate or total dissolved solids to suggest an offsite contributor. There are no other potential sources in the vicinity of the project that could cause a pollution of nitrate. Monitoring wells [MW]2 and [MW]3 indicate increasing concentrations over time. Pond samples have also indicated elevated levels of total dissolved solids and total nitrogen. Ponds liners only have compacted native soil and the wells are extremely close to the ponds. This information points to the pond system as the source of groundwater pollution. We appreciate that the District agrees that further groundwater investigation is needed to establish the nature and extent of groundwater pollution. For this reason the Monitoring and Reporting Program includes a time schedule for the District to submit a further evaluation the extent of pollution. Change: None
3	2	2d	The Monitoring and Reporting Program requires additional wells to be installed to evaluate the nature and extent of groundwater pollution at the Facility	There is agreement that the Monitoring Program should be more robust to fully understand the extent of groundwater pollution. That said, please refer to comment 2 to confirm if the Facility is the actualized contributor of said pollution.	Response: After discussion with Rosamond Community Services District staff, we appreciate that the District agrees with the requirement in the Order requesting a more robust groundwater monitoring plan be proposed. Please refer to the Water Board response no. 2, above explaining why the pond system is a pollution contribution source. The District indicated acceptance after the data was explained on October 6, 2015. Change: None

Enclosure 1: Water Board Staff Responses to GEI Consultant Comments on Tentative Waste Discharge Requirements for Rosamond Community Services District Wastewater Treatment/ Reclamation Plant. September 16, 2015

#	Page Section	Statement	Comments	Water Board Response
4	3 - 6	Geology	The well logs obtained directly from California Department of Water Resources identify the soil characteristics as layers of clay not sand, which is in conflict with the language provided in the BSK report. RCSD requests a copy of the 2007 report for our review to determine if samples obtained for this report are representative of conditions at the site.	Response: The data cited in Finding 6 in the Tentative Order were from a report provided by the District (BSK Associates, 2007). This report was prepared to support a recent pond expansion and the Water Board provided this report separately to GEI Consultants. Typically corroboration of field log boring observations need to be accompanied and verified by sieve analysis which classifies the soil using the Unified Soil Classification System (USCS) based on percentages passing in ASTM C-136, and establishing the plastic limit and liquid limit tests to confirm the veracity of a field technician/geologist/engineer's observations. The Time Schedule contained in the Monitoring and Reporting Program requires additional wells around the perimeter of the facility. Data obtained from the future additional and current wells will improve the site conceptual model. The boring locations in the BSK Associates report are near the southern portion of the plant between the tertiary plant and the pond system. The current Order No. 6-95-107, Finding 9 doesn't spell out the fractions of sand and fines and is therefore less scientific when it refers to a soils investigations done in August 1986 and June 1989 stating that soils calling underlying the site consist of "sandy clays and clayey silt/sands". Change: None
5	3	7a	Approximately 1.3 million gallons per day (mgd in 2014) of untreated wastewater influent.....	Response: Comment Accepted. Change: Change made as suggested.
6	4	7b	Any potential on-site clay liner material would have a questionable clay fraction, even if large fractions of sand were separated to produce an on-site clay liner	Response: The statement in Finding No. 7.b. of the Order is consistent with Finding No. 6 because the BSK report indicates that the soil is 50-60% sand, please see response to comment 4. Better understanding of the site would require a permeability test on each of the ponds in the pond system. The Work Plan requested in Section V of the Monitoring and Reporting Program may include actions to better assess the site properties. Change: None

Enclosure 1: Water Board Staff Responses to GEI Consultant Comments on Tentative Waste Discharge Requirements for Rosamond Community Services District Wastewater Treatment/ Reclamation Plant. September 16, 2015

#	Page	Section	Statement	Comments	Water Board Response
7	6	10	Quality of Groundwater and Influent Wastewater Table	Recommendation that there be further evaluation on the wells that are upgradient to evaluate the impact of upgradient wq	<p>Response: Addressing the District's second concern, Water Board staff agrees establishing upgradient water quality needs to be assessed as part of evaluating the nature and extent of groundwater pollution. A provision to install at least one background, or upgradient well is required for this in the Monitoring and Reporting Program under Section V. Current hydrogeologic site conceptual model is that ponds were not designed to percolate, but liner consists of re-compacted native soil. Over time the older ponds have leaked to groundwater and impacts are now becoming evident as shown on the data graph in Attachment E of the Order.</p> <p>The USGS published a Scientific Investigations Report in 2014-5166 which shows in Figure 8, the groundwater levels in 1996 has a general northerly gradient of groundwater flow in the footprint of the wastewater treatment facility. Figure 5 of that report, which shows a easterly flowing gradient, was created using from inference of 1915 data. The District currently has 4 groundwater monitoring wells in a L-configuration and needs additional wells in order to correctly determine the direction of groundwater flow.</p> <p>Change: None</p>
8	7	13	This Order establishes a Time Schedule for the Discharge to propose and implement a treatment and disposal plan that will remedy the existing unauthorized discharge and prevent further pollution	Premature to assume pollution exists as a result of the evap ponds. We are not saying the are not the source but are not certain that is the potential sole contributor	<p>Response: The District's Wastewater Treatment Ponds are the largest source of pollutants (Total Dissolved Solids and nitrate) to groundwater. Furthermore, the ponds are closest to the affected wells. There are no other potential sources in the vicinity of the wastewater treatment plant.</p> <p>Change: None</p>
9	8	16b	California Code of Regulations, Title 27	Be aware of this requirement, however meeting Title 27 may be feasible if it established that wq impacts are related to other sources.	<p>Response: This seems like an internal comment.</p> <p>Change: None</p>

Enclosure 1: Water Board Staff Responses to GEI Consultant Comments on Tentative Waste Discharge Requirements for Rosamond Community Services District Wastewater Treatment/ Reclamation Plant. September 16, 2015

#	Page	Section	Statement	Comments	Water Board Response
10	10	19a	Basis for Effluent Limitations	We need to better establish upgradient/downgradient WQ. Proposed Question: If the ponds are compromised, why do upgradient wells demonstrate increases in TDS/Nitrate but no variations in wq are noted in the downgradient wells?	Response: Question is not clear. Water Board staff previously concluded that a clear upgradient unaffected well has not been established therefore we cannot determine whether the variations or trends of nitrate and total dissolved solids are in upgradient or downgradient wells. Also, statistical analysis had indicated that each well has its own increasing contaminant concentration trends. The recent data collected in August 2014 and over the last five years indicate that receiving water quality objective for nitrate-nitrogen [10 mg/L] is exceeded in well 2 and for total dissolved solids [1500 mg/L] in wells 2 and 4. Change: None
11	12	23	The nearest water supply well (State Well No. 1500485-001) is located about 1.1 miles to the southwest of the Facility.	The well that is noted here is not the closest well to the Facility. There are wells directly west that are less than a mile from the ponds and these wells are upgradient. This well referenced in the Draft WDR is upgradient to the pond system, and as such would not be influenced by any changes in wq resulting from leakage.	Response: The location and presence of wells referred to in the comments located one mile to the west should not impact the overall assessment of the site. Rosamond Community Services District recently gave static and pumping water elevation levels to the Water Board on July 23, 2015 along with a survey of the well heads. This data confirmed a Scientific Investigations Report 2014-5166 page 17 by USGS with a groundwater map created with more recent data from 1996, which suggests regional flow moves in a northerly direction in the vicinity of the plant. Change: None
12	13	23	the Water Board may require in a separate order that the Discharger clean up and abate the impacts to the groundwater	Do we have enough data to make this determination?	Response: The purpose behind stating this authority in the last sentence of the second paragraph of Finding 23 is to clarify that this order does not require clean up. The Water Board has authority under the California Water Code, section 13304, to issue a clean up and abatement order to address conditions of pollution or nuisance.
13	14	27	II. Discharge Limitations	See previous comments.	Response: Comment is unclear, this looks like an internal note. Change: None

Enclosure 1: Water Board Staff Responses to GEI Consultant Comments on Tentative Waste Discharge Requirements for Rosamond Community Services District Wastewater Treatment/ Reclamation Plant. September 16, 2015

#	Page	Section	Statement	Comments	Water Board Response
14	19	27	VII. Time Schedule for Pond System	Assuming the ponds need to be relined due to demonstrated infiltration of the groundwater	<p>Response: Addressing the District's third concern, the Order finds that Rosamond Community Services District has contributed to pollution by discharge of waste to groundwater. Therefore Finding 16 states the Water Board cannot establish that the pond system qualifies for an exemption to section 20090, title 27, California Code of Regulations. Therefore, Rosamond Community Services District needs to propose an alternative that addresses this issue and meets Basin Plan requirements for discharge to receiving groundwater as stated in the Time Schedule Order outlined under Section VII. This demonstration may be met by constructing pond liners as required in title 27, or by proposing some other treatment and disposal plan to ensure that all discharges to waters meet the Basin Plan receiving water quality objectives.</p> <p>Change: None</p>
<p>References: a) BSK Associates. Addendum Soil and Foundation Investigation Wastewater Treatment Plant Expansion Rosamond Community Services District. Lee, Fred and Annie Jones-Lee. Overview of Subtitle D Landfill Design, Operation, Closure and Postclosure Care Relative to Providing Public Health and Environmental protection for as Long as the Wastes in the Landfill will be a Threat. Pg 2. January 2004. b) USGS. Groundwater-Flow and Land-Subsidence Model of Antelope Valley, California. Scientific Investigations Report 2014-5166. Page 17.</p>					

ENCLOSURE 4

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REVISED WASTE DISCHARGE REQUIREMENTS
ROSAMOND COMMUNITY SERVICES DISTRICT
DOMESTIC WASTEWATER TREATMENT PLANT,
KERN COUNTY

November 5, 2015 Board Meeting
Barstow, California
Cephas Hurr, WRCE

1

Presentation Outline

- Order Provisions
- Recycled Water Regulations
- Plant overview
- Groundwater Pollution
- Pond System Upgrades
- Other changes
- Recommendations

2

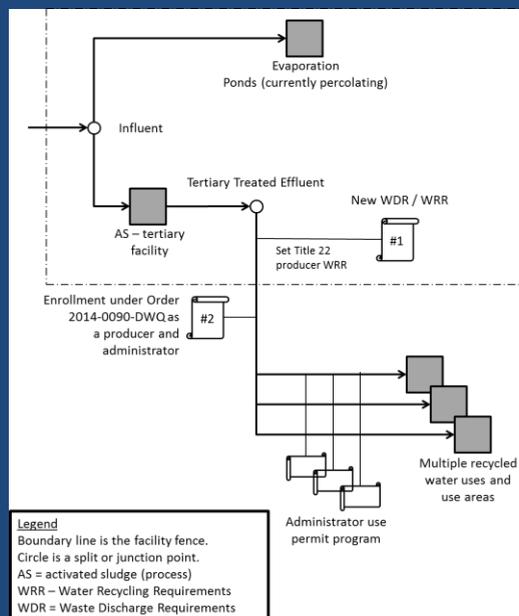
Major Order Provisions Included in Order

- Recycled water treatment standards for tertiary plant.
- Time schedule for installing additional groundwater monitoring wells.
- Time schedule for upgrading the pond system to meet title 27 liner standards or an acceptable alternative.

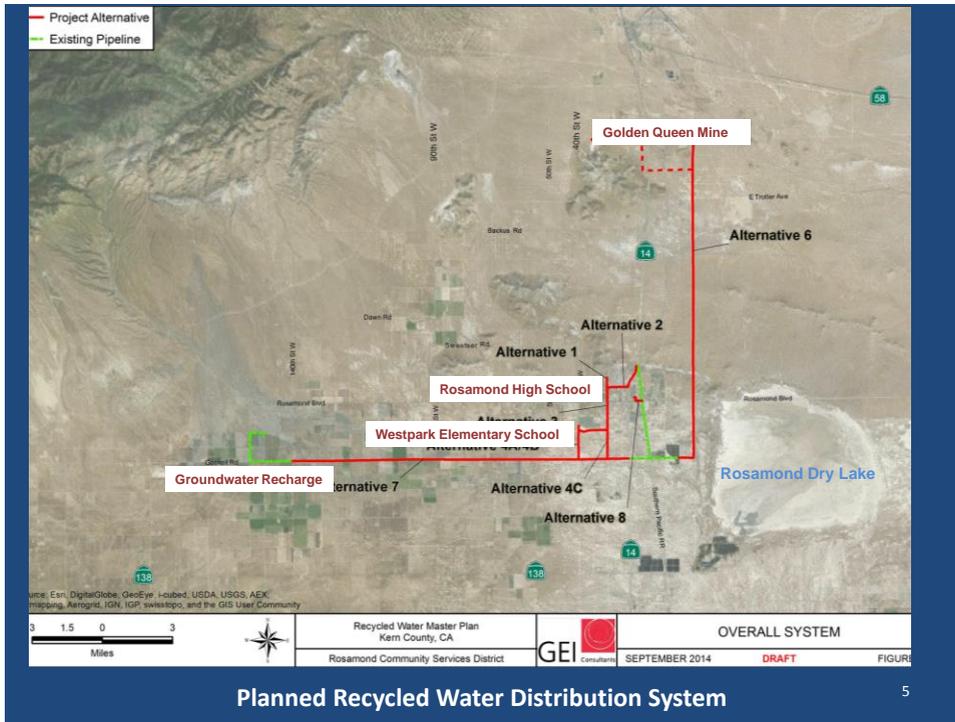
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Rosamond CSD Wastewater Treatment Discharge and Recycled Water Use Regulatory Measures

1. Recycled Water standards covered by Revised Waste Discharge Requirements.
2. Recycled water administration authorized under General Order 2014-0090-DWQ / by issuance of Notice of Applicability signed by Executive Officer



4



Planned Recycled Water Distribution System

5



Rosamond Wastewater Plant Overview

6

Groundwater Pollution

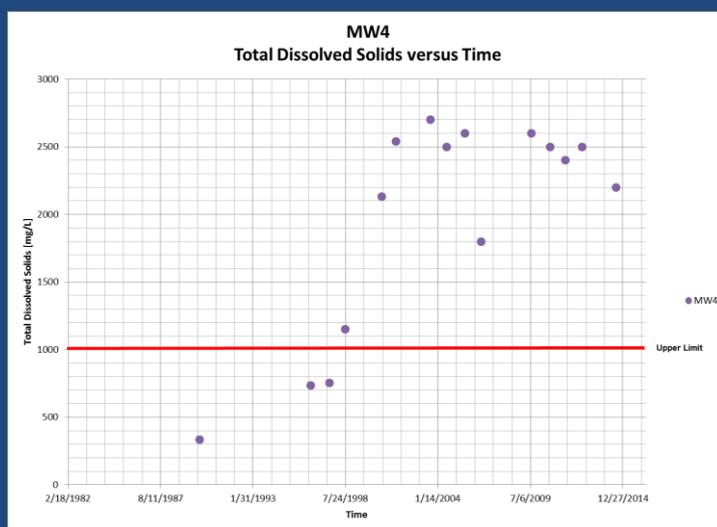
Current Groundwater Quality
Results of sample analyses collected on September 9, 2014

	Well No. 1 (MW 1)	Well No. 2 (MW 2)	Well No. 3 (MW 3)	Well No. 4 (MW 4)
Nitrate as Nitrogen (mg/L)	6.9	13	4.3	1.3
Total Dissolved Solids (mg/L)	1,000	1,500	1,100	2,200

- Data indicate pollution of Nitrate (NO₃) and Total Dissolved Solids (TDS).
- Discharges from pond system were not part of the original design nor authorized, and are occurring to groundwater.

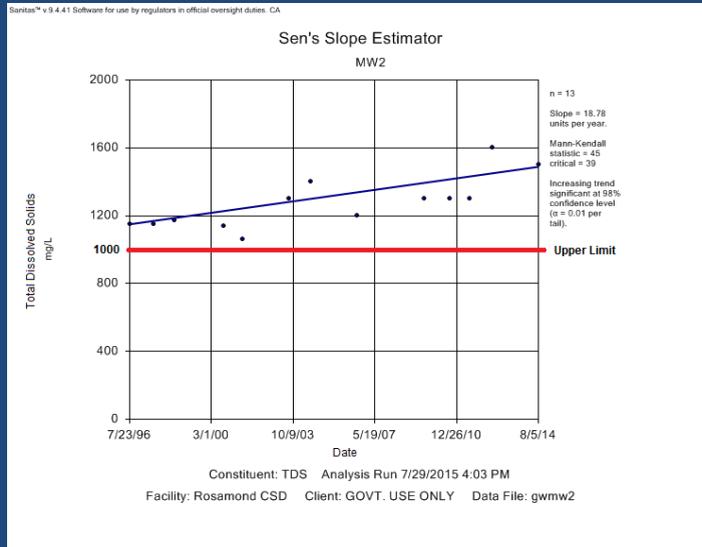
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Increasing Total Dissolved Solids in Groundwater



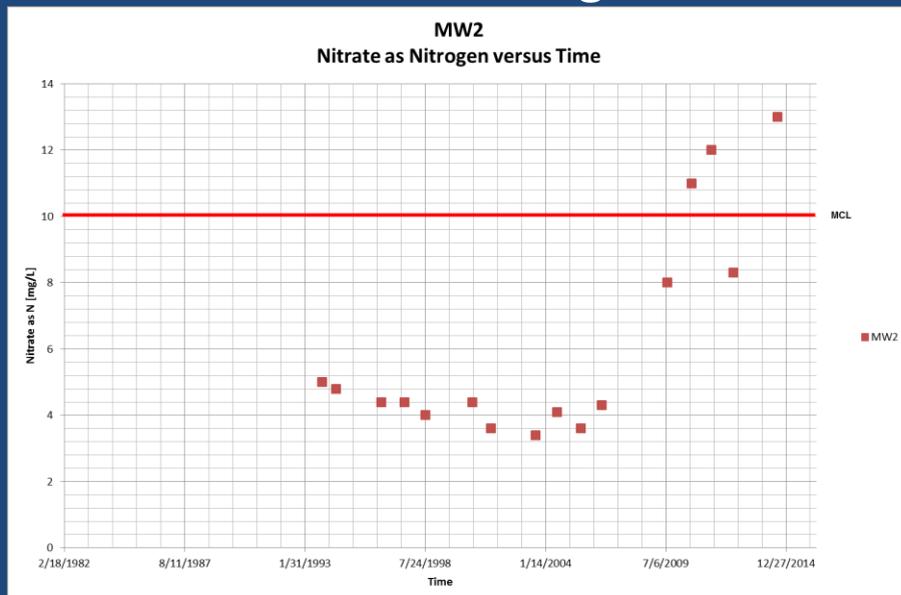
8

Increasing Total Dissolved Solids in Groundwater



9

Nitrate Exceeding MCL



Investigative Time Schedule

- Time schedule in Monitoring and Reporting Program to add more wells and establish background.
- Four existing wells provide inadequate coverage to evaluate discharge from plant to receiving waters (groundwater).

11

Groundwater Monitoring Wells

Schedule Date	Task
March 15, 2016	Submit work plan proposing additional wells to monitor groundwater pollution.
March 15, 2017	Complete monitoring well installation.
June 15, 2017	Submit a well completion report.

12

Pond System Upgrades

- Ponds are subject to Title 27 requirements because:
 1. Discharge does not meet Basin Plan water quality objectives.
 2. Discharge is Designated Waste.
- Time schedule incorporated in Waste Discharge Requirements allowing the District to:
 - a. Choose to line ponds and meet Title 27 standards, or
 - b. Propose some other alternative.

13

Time Schedule for Pond System

Schedule	Task
November 5, 2016	Submit a Feasibility Study of alternatives to ensure groundwater quality objectives are met or achieve full compliance with title 27.
November 5, 2017	Submit a report describing the preferred project alternative that will be implemented and a project schedule.
April 5, 2018	Submit an Initial Study to satisfy the California Environmental Quality Act (CEQA).
November 5, 2018	Submit a report providing the design specifications, and construction schedule. Include a revised Report of Waste Discharge (Form 200) describing the manner or method of wastewater treatment and/or disposal.
April 5, 2019	Begin construction.
November 5, 2020	Complete construction.
April 5, 2021	Submit As-Built plans.

14

Other Order Requirements

- Rescinds 1995 order and two amendments.
- Recycled water delivery conditionally approved pending DDW Engineering Report approval and letter from Executive Officer.
- This is first wastewater treatment facility for which groundwater data must be uploaded into Geotracker database.

15

Recommendations

- Staff recommends the Board adopt the Order as proposed.

16