



Lahontan Regional Water Quality Control Board

April 30, 2019

TO: ATTACHED MAILING LIST

REVISED WASTE DISCHARGE REQUIREMENTS FOR THE ROSAMOND COMMUNITY SERVICES DISTRICT, WASTEWATER TREATMENT FACILITY, KERN COUNTY

Enclosed are tentative Waste Discharge Requirements for the subject line facility, located in Rosamond. The California Regional Water Quality Control Board (Water Board) requests that you review the enclosed documents and provide us with your written comments no later than **May 30, 2019**. Please send your comments to the Water Board's email address at Lahontan@waterboards.ca.gov and include **Rosamond Community Services District, WDID No. 6B150112001 Comments** in the subject line text. If you do not have access to the internet, you may mail your comments to the Water Board's Victorville office at the address shown on this letter, to the attention of Sergio Alonso.

The Water Board will consider adopting the Revised Waste Discharge Requirements at its regular meeting scheduled for July 10 and 11 in Bishop, California. You can view the Water Board's meeting agenda 10 days before the meeting on our web site at: www.waterboards.ca.gov/lahontan (click on Agenda). If you need further information regarding this meeting, please contact our office at (760) 241-6583.

If you have any questions regarding this letter or the enclosed documents, please contact Sergio Alonso, Water Resource Control Engineer at (760) 241-7324, email sergio.alonso@waterboards.ca.gov, or Jay Cass, Senior Water Resource Control Engineer at (760) 241-2434, email jehiel.cass@waterboards.ca.gov.

Sandra Lopez
Associate Governmental Program Analyst

cc: mailing list

Enc: Tentative Revised WDR and MRP for Rosamond Community Services District

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

**BOARD ORDER R6V-2019-TENTATIVE
WDID No. 6B150112001**

**REVISED WASTE DISCHARGE REQUIREMENTS
FOR
ROSAMOND COMMUNITY SERVICES DISTRICT
ROSAMOND WASTEWATER TREATMENT FACILITY**

_____ Kern County _____

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

1. Discharger

The Rosamond Community Services District (District) owns and operates the Rosamond Wastewater Treatment Facility. For the purposes of this Board Order, the District is the “Discharger.”

2. Facility

For the purposes of this Board Order, the Rosamond Wastewater Treatment Facility is the “Facility.” Currently, wastewater is discharged from the headworks to evaporation/oxidation ponds that dispose of effluent through evaporation. As required in previous Board Order No. R6V-2015-0069, the Discharger proposed a project to upgrade its wastewater treatment system. Following upgrade completion, the Facility will discontinue use of the evaporation/oxidation ponds and incorporate a secondary treatment system that provides denitrified undisinfected secondary effluent. The effluent will be discharged into three newly constructed percolation ponds.

The Discharger’s new percolation ponds will be referred to as the “percolation pond system” or “percolation ponds” and the secondary treatment plant is herein after referred to as the “plant.” The facultative oxidation/evaporation ponds that will be discontinued upon upgrade completion are referred to as “evaporation/oxidation ponds.”

3. Facility Location

a. General Location - The Facility is located southeast of the unincorporated Kern County community of Rosamond, approximately one mile east of Highway 14, immediately west of Edwards Air Force Base, and as shown on Attachment A.

b. Legal Location Description - The Facility is located within Sections 27 & 34, Township 9 North (T9N), Range 12 West (R12W), San Bernardino Baseline and Meridian (SBB&M).

c. Physical Address - The Facility address is 1460 10th Street West, Rosamond, CA 93560.

4. Land and Facility Ownership

The Discharger owns the Facility and the associated properties, which are identified by the following assessor's parcel numbers in Kern County.

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

Source: Landvision Database from Digital Map Products

5. Reason for Action

Board Order No. R6V-2015-0069 included a time schedule to upgrade the Facility to either: a) re-construct the evaporation/oxidation ponds meeting the requirements of California Code of Regulations (CCR), title 27 requirements or b) propose an alternative project that would qualify for an exemption to CCR, title 27, by producing an effluent quality that is consistent with applicable water quality objectives. The Facility has been in violation of waste discharge requirements (WDRs) because leaking evaporation/oxidation ponds have caused pollution of underlying groundwater with total dissolved solids and nitrate. The time schedule was necessary to return the District to compliance because the underlying groundwater contains elevated concentrations of total dissolved solids (TDS) and nitrate due to District discharges. The time schedule is extended by seven months in this WDR to allow for completion of construction, testing, and start-up of the upgraded wastewater treatment plant. The Water Board is revising WDRs and the Monitoring and Reporting Program (MRP) for the following reasons.

- a. This Board Order reflects an extended time schedule by seven months to complete Facility upgrades. The upgrades include planned construction of treatment units to provide full secondary treated denitrified effluent, a new lined septage waste receiving pond, a new lined emergency overflow pond, percolation ponds for effluent disposal, and closure/inactivation of the existing evaporation/oxidation ponds.
- b. Establish secondary wastewater treatment effluent limitations, a new total nitrogen effluent limitation, and incorporate other requirements for a 1.27 million gallons per day (MGD) upgraded Facility.
- c. Establish justification that proposed Facility upgrades qualify the discharge for an exemption to CCR, title 27, Section 20090.
- d. Update the Facility's MRP, including requirements and time schedules requiring installation of additional groundwater monitoring wells to evaluate the nature and

extent of groundwater pollution caused by the Facility and compliance with this Board Order.

- e. Allow continued use of the existing evaporation/oxidation pond system until Facility upgrades are completed, tested, and successfully placed online.
- f. Continue the requirement that all reports and data must be uploaded to the State Water Quality Control Board's (State Water Board's) GeoTracker database.
- g. Include language consistent with current state law, requirements, and policies.

6. Board Order History

- a. 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; and January 11, 1990.
- b. 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.
- c. 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 a tertiary plant. Although that Order was never adopted, grant funding was obtained, and the tertiary plant was constructed and operated from 2011 to 2015 (see Finding 8).
- d. The Water Board adopted Board Order No. R6V-2015-0069 on November 5, 2015, replacing previous Board Order 6-95-107, and its amendments. Board Order No. R6V-2015-0069 contained a time schedule for the Discharger to propose, select, and construct an alternative Facility to eliminate the source of identified groundwater pollution containing elevated concentrations of nitrates and total dissolved solids (TDS) because the discharge did not qualify for a CCR, title 27 exemption. Continuous leakage from the oxidation ponds of effluent wastewater into groundwater was in violation of applicable water quality objectives that are a requirement to maintain CCR, title 27 exemption for a facility under a WDR.
- e. The District's sanitary sewer collection system is regulated under the State Water Board Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Board Order No. 2006-0003-DWQ, Waste Discharger Identification No. 6SSO11165.

7. Revised Report of Waste Discharge

The Discharger submitted preliminary plans for the upgrade project and a complete revised report of waste discharge (ROWD) to update WDRs under California Water Code (CWC) section 13260, on December 3, 2018. The documents constituting the ROWD are listed in the following table.

Report of Waste Discharge Components		
Date	Item	Author
December 3, 2018	<ul style="list-style-type: none"> Form 200 signed by Discharger Rosamond Community Service District Wastewater Treatment Plant Rehabilitation, Report of Waste Discharge Appendix A – Final Technical Report Appendix B – Groundwater Quality Graphs Appendix C – Parkson Biolac Preliminary Design Proposal 	Kennedy/Jenks Consultants
January 11, 2019	<ul style="list-style-type: none"> Response to December 21, 2018 Water Board Staff Comments on ROWD Nitrate Model Tech Memo 	Kennedy/Jenks Consultants
February 15, 2019	<ul style="list-style-type: none"> Amended Report of Waste Discharge 	Kennedy/Jenks Consultants
April 15, 2019	<ul style="list-style-type: none"> Amended Facility Flow Schematic and Site Map 	Kennedy/Jenks Consultants

8. Facility Description

Upon completion of plant upgrades, the Facility will be comprised of three components: (1) collection system and head works, (2) secondary treatment system and (3) percolation ponds. The Facility was originally a series of evaporation/oxidation ponds constructed with compacted native soil bottoms. As the population grew, additional ponds were added until today there are 16 evaporation/oxidation ponds, although they are numbered 1 through 15 and 17. Currently, all influent is first discharged into one of the ponds which serves as a treatment pond with aerators before going to the remaining evaporation/oxidation ponds.

In 2007, the Discharger received a grant from the State Water Board to construct a 0.50 MGD tertiary wastewater treatment plant to produce recycled water that operated from 2011 to 2015, after which the plant was placed in reserve status because the Discharger had no recycled water customers, and therefore did not complete an Engineering Report nor obtained water recycling requirements to produce and deliver recycled water. The Discharger proceeded to shut down the tertiary treatment plant and diverted all wastewater to the evaporation/oxidation ponds.

As a result of findings and time schedules contained in Board Order No. R6V-2015-0069 to address pond leakage, the Discharger proposes to re-activate the secondary treatment train of the 0.50 MGD plant, not operate the tertiary components, and construct a larger, similar secondary treatment plant. Thus, instead of producing tertiary treated recycled water, the Facility will produce secondary, denitrified effluent and convert the two newest oxidation/evaporation Ponds 15 and 17, located south of the treatment facility, into a series of percolation ponds for effluent disposal, as shown on Attachment B. The upgraded Facility will be comprised of the following components and its treatment flow process illustrated in Attachment C.

- a. Collection System and Head Works – To achieve optimal treatment quality the plant has a design flow rate of 1.27 MGD and it is estimated that the average daily wastewater flow will be 1.18 MGD. The headworks consists of the influent pump station, bar screen, and a grit removal/classification system. The bar screen is operated as a traveling chain-and-link system that removes large solids. Screenings are removed and disposed offsite periodically. Influent is pumped through a vortex grit chamber at grade. Grit slurry collected in the vortex grit chamber is pumped to a vortex grit separator and classifier for dewatering.
- b. Septage Receiving Station and Holding Pond – Prior to Facility upgrades, septage was delivered to evaporation/oxidation Pond 11. As part of the upgrade process, the southwest side of existing Pond 11 will be converted into a septage receiving station. Septage from the receiving station is passed through a coarse screen to remove large solids before proceeding to an 80-mil high density polyethylene (HDPE) lined septage holding pond. The aerated and mixed septage holding pond will contain approximately 90,000 gallons of septage waste and have a top surface area of 4,950 square feet at freeboard. Flows from the septage holding pond will discharge to the headworks at a controlled rate where they will mix with incoming influent and continue with the treatment process.
- c. Secondary Treatment Plant – Proposed upgrades to the treatment plant will provide secondary treatment that feeds influent from the headworks into two Biolac aeration basins and two secondary clarifiers. Biolac is a propriety technology using a lined basin, or pond, with a series of suspended aerators for extended aeration, activated sludge treatment. Denitrification is achieved by creating a series of oxic and anoxic zones within the basin. The Discharger is re-adjusting the flow capacity of the existing Biolac basin to treat 0.35 MGD and constructing a new Biolac basin to treat 0.92 MGD for a combined total design flow of 1.27 MGD. The existing secondary clarifier has a 45-foot diameter and a depth of 16 feet while the new secondary clarifier will have a 65-foot diameter and a depth of 16 feet.
- d. Evaporation/Oxidation Ponds – The existing 16 evaporation/oxidation ponds will be used until upgrades are completed, tested, and successfully placed online. Some of these ponds will be repurposed to serve as percolation ponds, septage receiving pond, and emergency overflow pond. The remaining unused ponds will then be abandoned. After sludge in these lagoons is sufficiently dry, all remaining sludge in

the lagoon bottoms will be removed and hauled offsite for proper disposal as authorized by United States Environmental Protection Agency (USEPA).

- e. Solids Handling – Waste sludge will be disposed into six new lined drying beds and five of the six existing lined drying beds. One of the existing six beds will need to be removed to make room for a new secondary clarifier. The six new beds will be slightly larger to make up for the area lost by removing one of the existing beds. Overall, the volume of the total beds will be double the volume of the current six existing beds. The existing beds are lined with 60-mil HDPE and the new beds will be lined with 80-mil HDPE. Dried sludge (biosolids) are hauled offsite for disposal/reuse at an authorized reuse or disposal site. Disposal of solids at the treatment/disposal site is not authorized.
- f. Percolation Pond System – Denitrified, undisinfected secondary effluent will be sent to Ponds 15 and 17, which will be modified into three percolation ponds each with a depth of seven feet. Provisions have been made to add a potential fourth percolation pond, if needed. The three percolation ponds will be operated on a 3-month rotation, one in service and two out of service. After drying, the pond bottoms will be scarified to improve percolation rates.
- g. Recycled Water Treatment – The facility will not produce recycled water or have recycled water treatment requirements.
- h. Effluent Quality - The upgraded plant will produce denitrified, undisinfected, secondary effluent that will be discharged to three new percolation ponds. The proposed effluent quality after the plant is upgraded is described in the table below.

Proposed Treatment Plant Effluent Quality	
Constituent	Concentration
Biochemical Oxygen Demand (BOD) (5-day at 20°C)	20 mg/L
Chemical Oxygen Demand (COD)	16 mg/L
Total Inorganic Nitrogen (TIN) ¹	< 10 mg/L
Total Dissolved Solids (TDS)	480 mg/L

¹Total inorganic nitrogen (TIN) includes ammonia plus nitrate and nitrite.

9. Authorized Disposal Sites

This Board Order authorizes the discharge of primary effluent to the existing evaporation/oxidation ponds until the time schedule specified in this Board Order requires discharge of denitrified, undisinfected secondary treated effluent to three percolation ponds that were part of Ponds 15 and 17 prior to rehabilitation/construction of the percolation ponds.

10. Recycled Water Exception

As stated in CCR, title 22, section 60303, recycled water requirements do not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment

plant, provided access by the public to the area of onsite recycled water use is restricted.

Discharge to unauthorized locations are prohibited by this Board Order.

11. Recycled Water

Recycled water treatment or use is not authorized by this Board Order.

12. Industrial Pretreatment Program

An industrial pretreatment program is not required by this Board Order; however, the MRP requires annual reporting of the Discharger's industrial pretreatment program activities.

13. Land Uses

The Facility is located in Kern County approximately four miles northeast of the intersection of State Route 138 (SR-138) and SR-14 in the community of Rosamond and just north of the Los Angeles County line. Commercial and residential areas are located to the northwest, west, and southwest. To the east of the Facility is Edwards Air Force Base, containing Rosamond Dry Lake. The Kern County, Rosamond Specific Plan, designates the Facility land use as "Other Facilities." Land immediately west of the Facility is zoned for "Heavy Industrial" use.

14. Site Topography

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 Rosamond Dry Lakebed is located approximately 2.5 miles east of the site.

15. Climatology

The Antelope Valley, in which the Facility is located, has an arid climate characterized by infrequent rainfall, cold winters and hot summers, and low relative humidity. The mean annual temperature is 80.6 degrees (°) Fahrenheit (F) and ranges from a high of 110° F in the summer to a low of 12° F in the winter. Precipitation in the vicinity of the Facility averages 4 inches annually. The maximum expected precipitation for the 24-hour, 100-year frequency design storm event is approximately 3.81 inches per hour.

16. Site Geology

The Antelope Valley is situated within the northwest portion of the larger Mojave Desert geomorphic province. This province is a wedge-shaped tectonic block bounded to the southwest by the San Andreas Fault Zone and on the northwest by the Garlock Fault Zone. The San Andreas and Garlock Fault Zones are approximately 20 miles southwest and 22 miles northwest of the Facility, respectively. There are no known

active (Holocene-age) faults beneath Facility or within a 5-mile radius of the Facility. The closest fault is Willow Springs fault located approximately 8.5 miles to the northwest of the Facility.

The geologic units beneath the Facility consist of the following, from oldest to youngest.

- a. Pre-Tertiary plutonic igneous and metamorphic rocks together form the crystalline basement rock beneath the site at depths ranging up to 3,000 feet below ground surface (bgs). They are largely granitic intrusions typical of the Sierra Nevada Batholith of late Jurassic or Cretaceous age and range in composition from hornblende diorite to granite.
- b. The Tertiary Tropic Group overlies the basement rock and consists of interbeds of shales, limestones, and coarse fluvial sedimentary rocks with basalts and pyroclastic deposits. The Tropic Group has a maximum exposed thickness of 2,800-feet in the vicinity of the site.
- c. Overlying the Tropic Group is Quaternary-age older and recent alluvium composed of unconsolidated and poorly sorted sands, silts, clays, and gravels. Based on bore log data collected from the Facility, the alluvial sediments are in excess of 90-feet thick beneath the site. The wastewater ponds are constructed overtop the recent alluvium.

17. Site Hydrogeology and Groundwater Quality

The Facility overlies the Antelope Valley Groundwater Basin. Groundwater beneath the Facility occurs in the alluvium at an average depth of approximately 60 to 80 feet bgs. The depth to groundwater beneath the site has generally decreased since monitoring began in 1988 and flows in an easterly direction towards Rosamond Dry Lake.

The Discharger has been monitoring groundwater quality beneath the Facility since 1988. Elevated concentrations of TDS, chloride, sulfate, and nitrate have been detected in several groundwater monitoring wells. Over the last 17 years, TDS concentrations in the groundwater have ranged from 590 milligrams per liter (mg/L) to 2,800 mg/L. Similarly, chloride concentrations in the groundwater have ranged from 15 mg/L to 650 mg/L, and sulfate concentrations in the groundwater have ranged from 100 mg/L to 550 mg/L. Nitrate concentrations in the groundwater have ranged from non-detect up to 20 mg/L.

18. Site Hydrology

The Facility is within the Lancaster Hydrologic Area of the Antelope Valley Hydrologic Unit. All water that enters the valley infiltrates into the groundwater, evaporates, or flows overland eventually toward one of three dry lakes: Rosamond Dry Lake, Buckhorn Dry Lake, or Rogers Dry Lake.

19. Site Stormwater Management

Stormwater protection at the Facility is primarily accomplished through drainage control based on the following objectives: protection from run-on; minimize infiltration of precipitation into the waste; minimize exposure of pollutants to precipitation; manage run-off to minimize erosion and sedimentation; and minimize offsite migration of stormwater. To achieve these objectives, the Discharger implements structural and non-structural Best Management Practices (BMPs) to mitigate potential pollution of stormwater discharges and performs site compliance inspections to evaluate the effectiveness of the BMPs. The Discharger will continue to implement BMPs and perform inspections throughout the use of the Facility.

This Order requires prohibitions, limitations, and provisions for stormwater and non-stormwater discharges at the Facility to protect both groundwater and surface water quality.

20. 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 Board Order implements the Basin Plan, as amended.

21. Receiving Waters

The receiving waters are the groundwater of the Antelope Valley Groundwater Basin (California Department of Water Resources Basin No. 6-44).

22. Beneficial Uses

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).

23. Groundwater Water Quality Objectives

The water quality objectives for groundwater in the Antelope Valley Groundwater Basin have been established in the Basin Plan and include the following:

- a. Bacteria, coliform;
- b. Chemical Constituents;
- c. Radioactivity; and
- d. Taste and Odors;

Additional information about water quality objectives is provided in this Order, Section III, Receiving Water Limitations.

24. Rosamond CSD Drinking Water Supplies

Drinking water supplied to the community of Rosamond is distributed by the Discharger and produced from groundwater production wells located about three miles west and upgradient of the Facility. Because the Antelope Valley groundwater basin has adjudicated groundwater pumping rights, the Discharger intends that treated effluent percolated to the Facility’s percolation ponds may be used to offset its municipal supply water production limits and provide additional municipal supply water pumping credits.

Drinking water produced between 2015 and 2017 complied with all primary and secondary state and federal drinking water standards. The table below summarizes drinking water test results for nitrate as nitrogen and TDS from the Discharger’s Consumer Confidence Reports (2015 to 2017) and compares the results to the nitrate and TDS water quality objectives for groundwater set forth in the Basin Plan.

Rosamond Supply Water		
Period	Nitrate as Nitrogen (mg/L)	TDS (mg/L)
2015	8.2	280
2016	1.8	280
2017	1.8	296
Water Quality Objectives	10	500 ¹ /1,000 ² /1,500 ³

1. Recommended Maximum Contaminant Level (MCL) per CCR, title 22, Drinking Water Standards.
2. Upper MCL per CCR, title 22, Drinking Water Standards.
3. Short Term MCL per CCR, title 22, Drinking Water Standards.

25. Receiving Groundwater Quality

There are currently 11 groundwater monitoring wells located at the Facility as shown on Attachment D, numbered 1 through 8 and 10 through 12.

The following table summarizes 2018 annual groundwater quality data in the wells surrounding the Facility, as provided in self-monitoring reports. Items in bold indicate values exceeding the designated water quality objectives, which are primary or secondary drinking water maximum contaminant levels (MCLs).

2018 Groundwater Quality Beneath the Rosamond Wastewater Plant		
Monitoring Wells	Nitrate as Nitrogen (mg/L)	TDS (mg/L)
MW 1	6.7	1,300
MW 2	9.3	1,200
MW 3	8.3	1,000
MW 4	6.1	1,800
MW 5	2.3	1,900
MW 6	2.6	1,300

2018 Groundwater Quality Beneath the Rosamond Wastewater Plant		
Monitoring Wells	Nitrate as Nitrogen (mg/L)	TDS (mg/L)
MW 7	4.9	1,100
MW 8	ND ¹	1,500
MW 10	6.7	1,300
MW 11	14	2,300
MW 12	0.5	1,100
Water Quality Objectives	10	500²/1,000³/1,500⁴

1. ND – Not detected.
2. Recommended MCL per CCR, title 22, Drinking Water Standards.
3. Upper MCL per CCR, title 22, Drinking Water Standards.
4. Short Term MCL per CCR, title 22, Drinking Water Standards.

Analyses of nitrate and TDS concentrations in groundwater samples collected from monitoring wells indicate that nitrate as nitrogen concentrations in well MW-11 (and occasionally other wells) and TDS concentrations in all wells exceed the Basin Plan water quality objectives for groundwater. These results confirm that the integrity of the Facility’s evaporation/oxidation pond liners are compromised and that discharges from those ponds are contributing to the elevated nitrate and TDS concentrations in receiving groundwater. Higher quality treated effluent from the upgraded Facility will discharge to the percolation ponds and recharge the groundwater. Through dilution over time, improved groundwater quality is expected to lower the elevated concentrations of nitrate as nitrogen and TDS in the receiving groundwater.

26. Groundwater Monitoring Network

There are currently 11 groundwater monitoring wells operated by the Discharger and located in the vicinity of the Facility.

This Board Order requires the Discharger to establish a groundwater monitoring network around the evaporation/oxidation ponds and percolation ponds and install additional groundwater monitoring wells to verify that the discharge complies with the Basin Plan and Board Order requirements.

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

State Water Board Resolution No. 68-16 “*Statement of Policy with Respect to Maintaining High Quality Waters in California*,” also called the non-degradation policy, states:

1. *“Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that a change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.*”

2. *Any activity which produces or may produce a waste...and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur, and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."*

To the extent a discharge covered under this permit may be to high quality waters, this permit authorizes degradation consistent with the Antidegradation Policy and the Basin Plan as described below.

Leakage from the evaporation/oxidation ponds caused pollution and the discharges did not comply with water quality objectives established in the Basin Plan. As a result, the Discharger is planning to conduct Facility upgrades. The treatment of waste and the continued use of the Facility is essential to the waste management of the community and is of the maximum benefit to the people of the state and provides sufficient justification for allowing the groundwater degradation that may occur pursuant to this permit.

This Board Order establishes a new nitrogen effluent limitation and other requirements to ensure the discharge will not cause a condition of pollution or nuisance and will meet water quality objectives. Additionally, the Discharger's planned upgrades to the Facility will result in best practicable treatment or control of the discharge to ensure pollution will not occur and provide the highest water quality consistent with maximum benefit to people of the State. This Board Order continues and extends the time schedule deadlines by seven months to culminate on June 1, 2021, to have upgrades, testing, and start-up completed and begin discharge to the percolation ponds. The required time schedule is designed to upgrade the Facility so that the discharge will not unreasonably affect present and anticipated beneficial use of such water, and would meet water quality objectives. Furthermore, the percolation of treated effluent is expected to dilute the high TDS concentrations currently seen in groundwater, given the lower TDS concentrations in the treated effluent.

The Water Board finds that the discharge is consistent with Resolution No. 68-16 because this Board Order: (1) requires compliance with the requirements set forth in this Board Order; (2) requires implementation of the MRP; and (3) requires compliance with new effluent limitations for nitrogen to protect beneficial uses.

28. California Water Code, Section 13241 Considerations

Pursuant to Water Code section 13241, the requirements of this Board 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, an adjudicated basin. The requirements in this Board Order are to maintain the most sensitive beneficial use: Municipal and Domestic Supply (MUN). This Board Order extends the Time

Schedule from previous Board Order No. R6V-2015-0069 by seven months for the Discharger to implement a project to produce higher quality effluent that is expected to be protective of these uses or build lined evaporation/oxidation ponds that are compliant with CCR, title 27. This Board Order also establishes a new nitrogen effluent limitation protective of these uses.

- b. Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto – The Antelope Valley Groundwater Basin is a closed basin and will experience increases in salt loading from natural and anthropogenic sources, over time. Near the Facility, historical data indicate that background nitrate and TDS concentrations met water quality objectives protective of designated beneficial uses. However, the receiving groundwater quality beneath the Facility does not currently meet Basin Plan Water Quality Objectives. The discharge of treated effluent to percolation ponds that meets a new effluent limitation for total nitrogen established in this Board Order and effluent TDS concentrations of higher quality than receiving groundwater would positively affect groundwater recharge, while at the same time meet the objective of reducing groundwater level declines set by the Antelope Valley Groundwater Adjudication. It is in the best interest of the people of the state for the Discharger to propose and construct facilities to improve its effluent quality that limits further groundwater pollution. This Board Order extends the Time Schedule by seven months from Board Order No. R6V-2015-0069 and continues the requirements for the Discharger to upgrade the facility 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 adjudicated, and the Discharger participates with the Antelope Valley Watermaster in coordinated water supply efforts. Planned upgrades will improve receiving groundwater quality with respect to nitrogen, but not remove TDS. In the future, the Water Board may separately require the Discharger to cleanup underlying polluted groundwater. The Discharger intends its improved effluent quality discharged to groundwater to provide credit from the Antelope Valley Watermaster for municipal groundwater production allowances.
- d. Economic considerations – Costs to construct the upgraded Facility that will meet Basin Plan water quality objectives is an estimated \$11,350,000. The Discharger will apply for and may receive some level of support from state loan or grant opportunities for construction of the upgraded Facility. The costs associated with continued Facility operation are similar to costs for other communities. Further upgrade of the Facility to remove TDS, such as installation of a reverse osmosis (RO) system or an ion exchange system is not currently economically feasible for the community of Rosamond.
- 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 Board Order does not establish requirements for recycled water. Under this Board Order, the Facility will provide denitrified, undisinfected secondary treated effluent to three new percolation ponds for groundwater recharge.

29. Human Right to Safe, Clean, Affordable, and Accessible Water

CWC, section 106.3, establishes a state policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes and directs state agencies to consider this policy when adopting regulations pertinent to those uses of water. This Board Order promotes that policy by prohibiting the discharge from causing further groundwater pollution and establishing a new nitrogen effluent limitation. The groundwater in the area includes a MUN beneficial use. The nearest water supply well (State Well No. 1500485-001) is located about 0.7 miles to the southwest (upgradient) of the Facility.

This Board Order requires the Discharger to monitor groundwater and install additional monitoring wells to verify that the discharge complies with the Basin Plan and Board Order requirements.

This Board Order requires Facility upgrades based on the time schedules that are extended by seven months from previous Board Order No. R6V-2015-0069.

30. California Code of Regulations, Title 27

CCR, title 27, sections 20090 (a) and (b) state that discharges are exempt from title 27 requirements for waste disposal provided the activity meets and continues to meet the following pre-conditions:

“(a) Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division,” and

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

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

Board Order No. R6V-2015-0069 determined that the Facility did not qualify for a CCR, title 27 exemption because leakage from the evaporation/oxidation ponds caused pollution and that the discharges did not comply with water quality objectives established in the Basin Plan. However, discharges from the upgraded Facility are expected to meet the conditional exemption for discharges of domestic sewage because: 1) the discharge is regulated by WDRs, 2) the discharge requirements and expected effluent quality are consistent with applicable water quality objectives, 3) the Facility is a municipal wastewater treatment plant, 4) all residual biosolids are disposed off-site in an authorized manner as required in CCR, title 27, section 20220(c), and 5) the treated wastewater is not considered a hazardous waste.

Discharges from the existing evaporation/oxidation ponds do not qualify for a CCR, title 27 exemption because they contribute to further pollution. For this reason, the time schedules contained in Board Order No. R6V-2015-0069 have been continued in this Board Order but the date for construction completion, testing, and start-up of the upgraded facility have been extended by seven months while other time schedule requirements have received shorter delays.

31. California Environmental Quality Act (CEQA)

The Discharger prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the Project and the Lead Agency for this Project under CEQA guidelines. The IS/MND was prepared pursuant to the California Environmental Quality Act (CEQA, Public Resources Code 21000, et seq.) and circulated under State Clearinghouse No. 2019039013. The Discharger certified the IS/MND on (expected May 22, 2019), following public review.

The Water Board, acting as a CEQA Responsible Agency in compliance with CCR, title 14, section 15096, has considered the IS/MND for the Project and the potential water quality impacts. The Water Board sent non-substantive comments on March 26, 2019. As a result of the analysis, the Water Board finds potential water quality impacts are less than significant with mitigation.

32. Technical and Monitoring Reports

This Board Order requires the Discharger to submit self-monitoring and technical MRP reports pursuant to CWC, section 13267. These reports will evaluate compliance with the Board Order requirements and 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 MRP associated with this Board Order generally requires the Discharger to submit technical groundwater reports including the following:

- Establishing compliance with effluent limitations;
- 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 Board Order requires reports describing how the time schedule is being complied with through planned Facility upgrades. Effluent and groundwater monitoring is required to determine if Facility discharges are impacting waters of the State. The MRP associated with this Board Order requires the Discharger to collect representative groundwater samples and analyze and report the sampling data to evaluate compliance with the Basin Plan water quality objectives and this Board Order. These reports will evaluate compliance with the Board Order requirements and ensure the discharge complies with the Basin Plan. Therefore, the burden, including costs, of these reports bears a reasonable relationship to the need for the report and the benefits to be obtained from the reports.

33. Basis for Establishing Effluent Limitations

The basis for the numerical effluent limitations contained in this Board Order are described below.

- a. Biochemical oxygen demand (BOD) and total suspended solids (TSS) – Effluent limitations are based on USEPA secondary treatment standards for domestic wastewater treatment facilities, as allowed by the Basin Plan.
- b. Dissolved oxygen (DO) – Effluent limitation is protective of MUN beneficial use and ensures that the effluent has been fully stabilized. A minimum of 1.0 mg/L for DO has been established to control odors causing a nuisance.
- c. Methylene blue active substances (MBAS) – Effluent limitation is protective of MUN beneficial use and is established at the secondary MCL for foaming agents.
- d. Total nitrogen – Protective of MUN beneficial with a primary MCL of 10 mg/L for nitrate as nitrogen. Total nitrogen is the sum of total Kjeldahl nitrogen (ammonia and organic nitrogen), nitrate, and nitrite. Thus, achieving an effluent limitation of 10 mg/L for total nitrogen will ensure protection of the primary MCL for nitrate.
- e. pH – Protective of MUN beneficial use and maintains a generally neutral effluent quality.

34. Disinfection Byproducts Controls

Disinfection is not required by this Board Order and no disinfection byproduct controls are required.

35. Classification and Annual Fees

Pursuant to CCR, title 23, section 2200(a), the "Threat to Water Quality" from the Facility discharge is "Category (2)" because discharges have 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. This classification is subject to change based on treatment or discharge method modifications or revised state regulations. Annual fees are based on this classification.

36. Time Schedules

Pursuant to CWC, section 13263(c), WDRs may contain time schedules. This Board Order extends the time schedules contained in previous Board Order No. R6V-2015-0069 to implement a project that will result in the discharge meeting Basin Plan requirements.

37. Notification of Interested Parties

The Water Board has notified the Discharger and interested agencies and persons of its intent to revise WDRs for this Facility and has provided them with an opportunity to submit their written views and recommendations.

38. 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 CWC, sections 13260 and 13263, and the authority of the Water Board, that Board Order No. R6V-2015-0069 is hereby rescinded, except for enforcement related purposes.

IT IS FURTHER HEREBY ORDERED, pursuant to CWC, sections 13260, 13263, and 13267, that the Discharger shall comply with the following:

I. **FLOW, FREEBOARD AND AUTHORIZED DISCHARGE LIMITS**

- A. The combined flow of: (1) influent wastewater and, (2) septage influent during a 24-hour period shall not exceed an average of 1.27 MGD.
- B. The freeboard in the evaporation/oxidation ponds, percolation ponds, sludge drying beds, and septage pond shall not be less than two feet as measured from a fixed referenced indicator based upon the lowest pond dike elevation. The freeboard in the emergency storage pond, having additional secondary containment, shall not be less than 18 inches as measured from a fixed referenced indicator based upon the lowest pond dike elevation.

- C. The authorized discharge sites are existing evaporation/oxidation ponds as shown in Attachment D and, after the time schedules specified in this Board Order have been met, three percolation ponds as identified on Attachment B.

II. EFFLUENT DISCHARGE LIMITATIONS

In accordance with the time schedule specified in this Board Order, Facility discharges shall not exceed the following effluent limitations prior to discharge to the percolation ponds.

Effluent Limitations			
Constituent	Units	Monthly Average	Maximum
Biochemical Oxygen Demand (BOD) (5-day at 20°C)	mg/L	30	45
Dissolved Oxygen (DO) ¹	mg/L	>1.0	NA ²
Methylene Blue Active Substances (MBAS)	mg/L	NA ²	0.5
pH	units	NA ²	6.0 – 9.0
Total Nitrogen	mg/L	10 ³	NA ²
Total Suspended Solids (TSS)	mg/L	30	45

¹. If DO is below 1.0 mg/L during three consecutive sampling events, the Discharger shall take appropriate action to increase DO and commence daily monitoring until the problem is resolved.

². NA – Not applicable.

³. Total nitrogen comprised of total Kjeldahl nitrogen, nitrate, and nitrite must not exceed a monthly average of 10 mg/L for all samples collected.

III. RECEIVING WATER LIMITATIONS

- A. The discharge shall not cause exceedance of the water quality objectives for the groundwater of the Antelope Valley Groundwater Basin.
- B. The discharge shall not cause the groundwater of the Antelope Valley Groundwater Basin to contain:
1. Bacteria – In groundwaters designated as MUN, the median concentration of coliform organisms over any seven-day period shall be less than 1.1/ milliliters. The unit is defined as most probable number per 100 milliliters (MPN/100 mL).
 2. Chemical Constituents – Groundwaters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22, which are incorporated by reference into the Basin Plan: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Limits), and Table 64449-B of Section 64449 (SMCLs – Consumer Acceptance Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

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).

Groundwaters shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

3. Radioactivity – Groundwaters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Table 64442 of section 64442 and Table 64443 of section 64443 of title 22 of CCR, which is incorporated by reference into the Basin Plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
4. Taste and Odors – Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwater designated as MUN, at a minimum, concentrations shall not exceed adopted SMCLs specified in table 64449-A of section 64449 (SMCLs – Consumer Acceptance Limits), and table 64449-B of section 64449 (SMCLs – Consumer Acceptance Ranges) of CCR, title 22, including future changes as the changes take effect.

IV. RECYCLED WATER

Recycled water production or use is not authorized by this order.

V. GENERAL REQUIREMENTS AND PROHIBITIONS

- A. The discharge shall not cause or threaten to cause pollution, as defined in CWC, section 13050, subdivision (l).
- B. Neither the treatment nor the discharge shall cause a nuisance, as defined in CWC, section 13050, subdivision (m).
- C. The discharge of waste that causes exceedance of any numeric or narrative water quality objective contained in the Basin Plan is prohibited.
- D. Where any numeric or narrative water quality objective contained in the Basin Plan is already being exceeded, the discharge of waste that causes further degradation or pollution is prohibited.
- E. The discharge of waste to surface waters is prohibited.
- F. Bypass (the diversion of waste streams from any portion of Facility) is prohibited, except for controlled discharge to the emergency overflow pond.

- G. The offsite disposal of waste residue, including sludge, shall be in a manner that complies with all local, state, and federal requirements.
- H. The onsite disposal of waste residue, including sludge, is prohibited.
- I. All facilities used for collection, transport, treatment, 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.
- J. The discharge of wastewater except to the authorized discharge sites is prohibited.
- K. The treatment plant shall be maintained and operated at maximum operating efficiency for biological and nutrient removal.
- L. The Discharger shall comply with all existing Federal and State Laws and regulations that apply to sewage sludge use and disposal practices.
- M. Industrial waste discharge into the septage receiving pond (evaporation/oxidation Pond 11, after retrofit) is prohibited.
- N. The final use and disposal of biosolids shall comply with the USEPA, Part 503 Biosolids Rule (Code of Federal Regulations, title 40, part 503).
- O. The three percolation ponds and any additional percolation ponds shall be operated in a manner to promote percolation.
- P. If the District proposes to construct additional percolation ponds, construction plans and time schedules shall be submitted to the Water Board. Upon the concurrence of the Executive Officer, the District may complete construction and shall provide the as-built diagrams within 90-days following construction completion.
- Q. The three new percolation ponds will be operated on a 3-month rotation, one in service and two out of service. After drying, the pond bottoms will be scarified to improve percolation rates.

VI. PROVISIONS

A. Operator Certificates

The Facility shall 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 shall comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment E, which is made part of this Board Order.

C. Monitoring and Reporting

Pursuant to CWC, section 13267, the Discharger shall comply with the MRP as specified by the Executive Officer.

D. Sampling and Analysis Plan

Pursuant to CWC, section 13267, the Discharger shall submit a Sampling and Analysis Plan (SAP), subject to revision if site conditions change such as new monitoring wells are installed, analytical methods change, or the Executive Officer authorizes a change in frequency. The reporting requirements for the SAP are specified in the MRP.

E. Stormwater Pollution Prevention Plan

The Discharger shall develop and implement a site-specific stormwater pollution prevention plan (SWPPP) to prevent and reduce waste in discharges of stormwater.

VII. TIME SCHEDULES

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

Time Schedule		
Item	Schedule Date	Task
A.	December 1, 2019	Submit the First Status Report signed by the Discharger's general manager indicating the status of construction for required Facility upgrades. This report should include the Facility upgrade 60% design plans and stormwater construction BMPs.
B.	June 1, 2020	Submit Second Status Report signed by the Discharger's general manager indicating the status of construction for required Facility upgrades.
C.	March 1, 2021	Substantially complete construction. Submit a report signed by the Discharger's general manager indicating that construction is substantially completed.

Time Schedule (Continued)		
Item	Schedule Date	Task
D.	March 1, 2021	Submit a work plan that address the following: 1. Removal and disposal of sludge from the bottom of the abandoned evaporation/oxidation ponds, 2. Implementation schedule, 3. Implementation description, and 4. Disposal location for the removed material.
E.	June 1, 2021	After testing successful start-up of the accepted project, begin discharging denitrified undisinfected secondary treated effluent.
F.	August 1, 2021	Submit a report signed by a California registered civil engineer providing the Final As-Built Construction Plans of the completed project.

Technical reports shall include the signature, stamp, and contact information of the California licensed Civil Engineer responsible for the content and construction plans for the proposed project.

The Executive Officer is authorized to grant extensions to the schedule dates indicated in the Board Order.

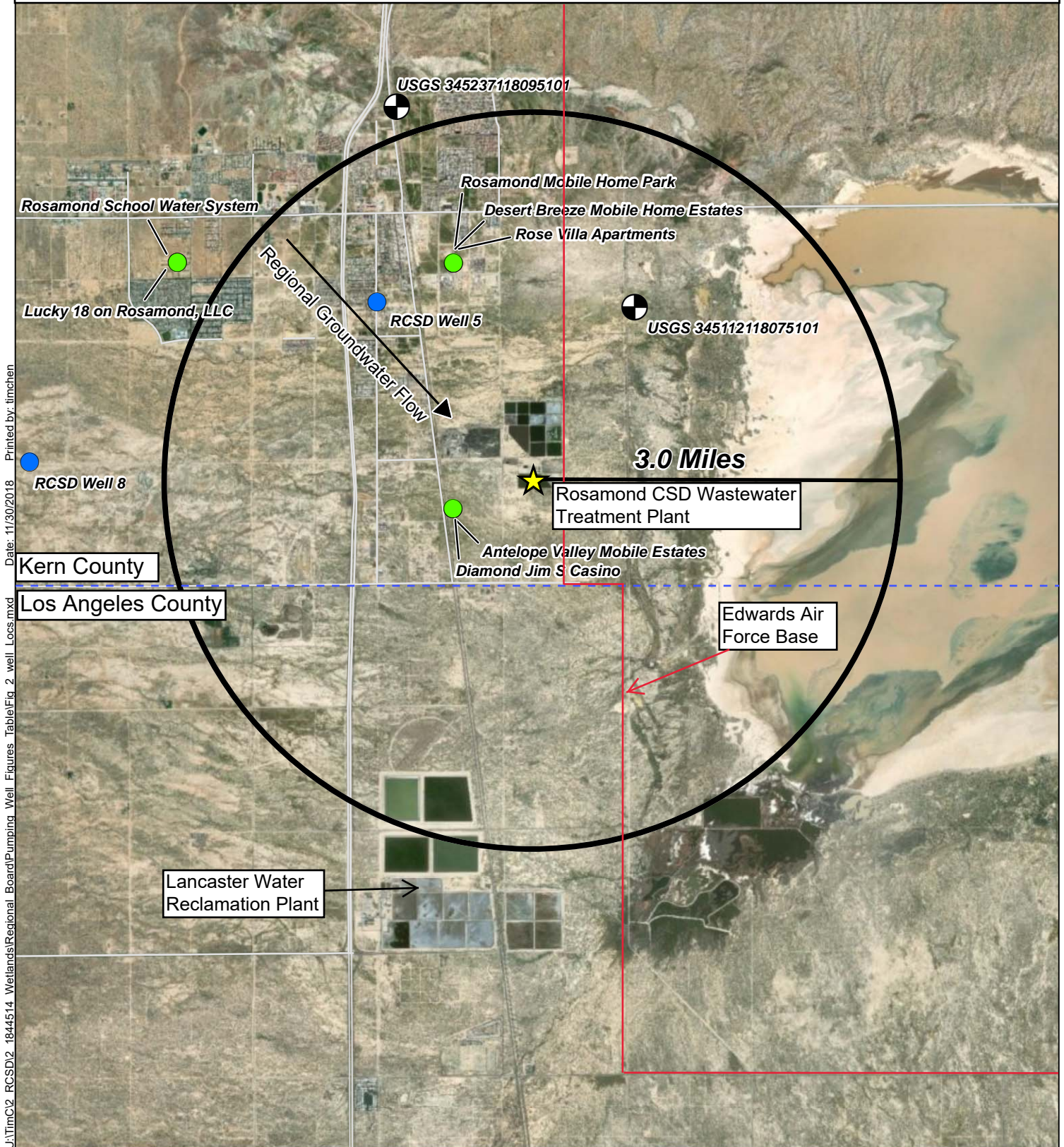
I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Board Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on July 11, 2019.

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments:

- A. Rosamond CSD General Location Map
- B. Rosamond CSD Percolation Ponds
- C. Rosamond CSD Facility Flow Schematic
- D. Rosamond CSD Wastewater Facility and Groundwater Monitoring Wells
- E. Standard Provisions for Waste Discharge Requirements dated September 1, 1994.

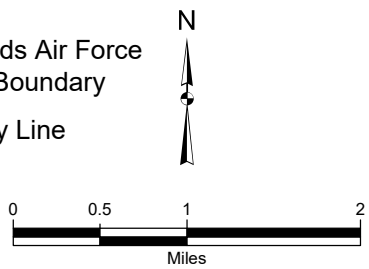
Attachment A - General Location Map



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Legend

- ★ RCSD WWTP
- RCSD Pumping Wells
- Other Pumping Wells (Source: GeoTracker Gama, 2018)
- ⊗ USGS Wells
- Edwards Air Force Base Boundary
- - - County Line



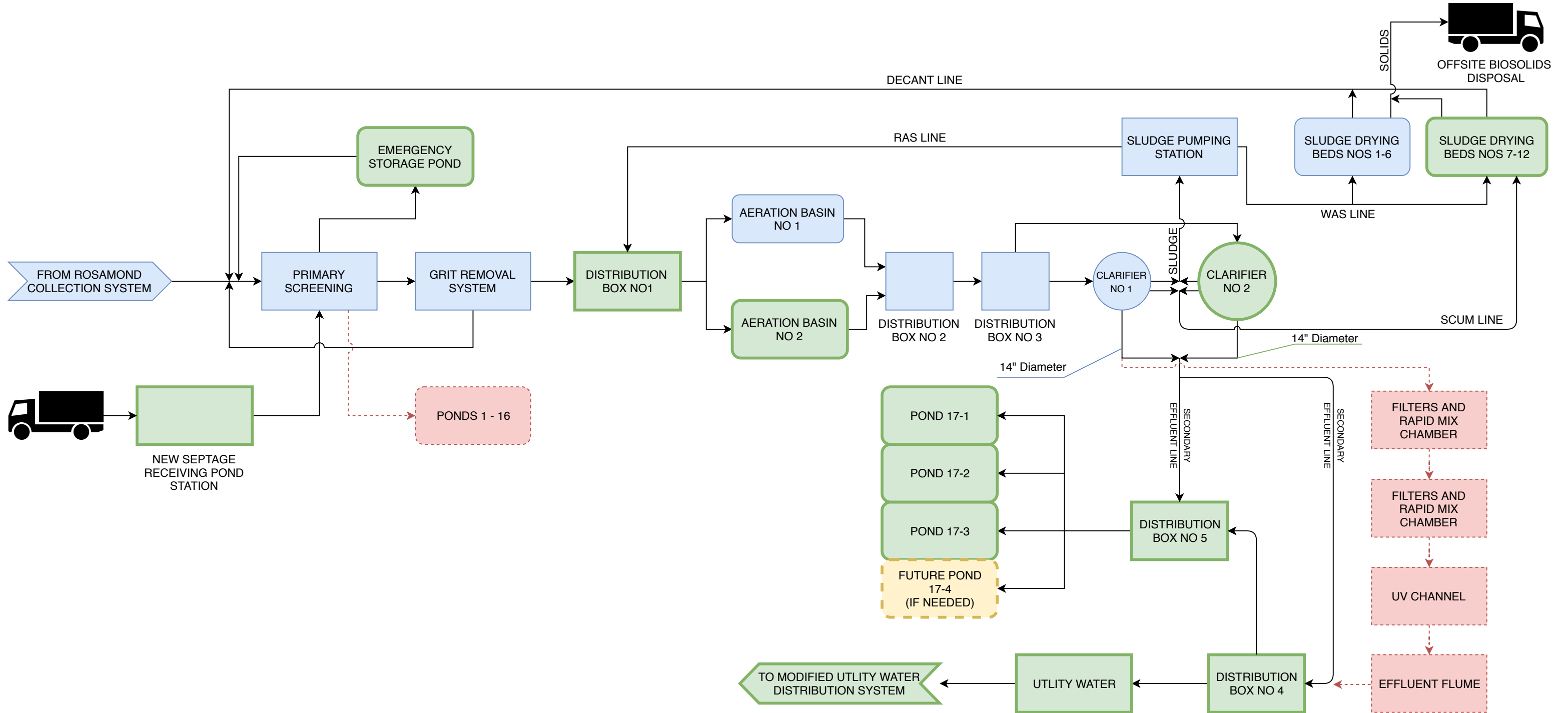
Kennedy/Jenks Consultants

Rosamond Community Services District
Kern County, CA

RCSD WWTP Rehabilitation Project Report of Waste Discharge Wells Within 3-Mile Radius Range

1844514*01

Figure 12



LEGEND

- NEW/UPGRADED EQUIPMENT
- EQUIPMENT TAKEN OUT OF SERVICE
- EXISTING EQUIPMENT
- FUTURE (IF NEEDED)

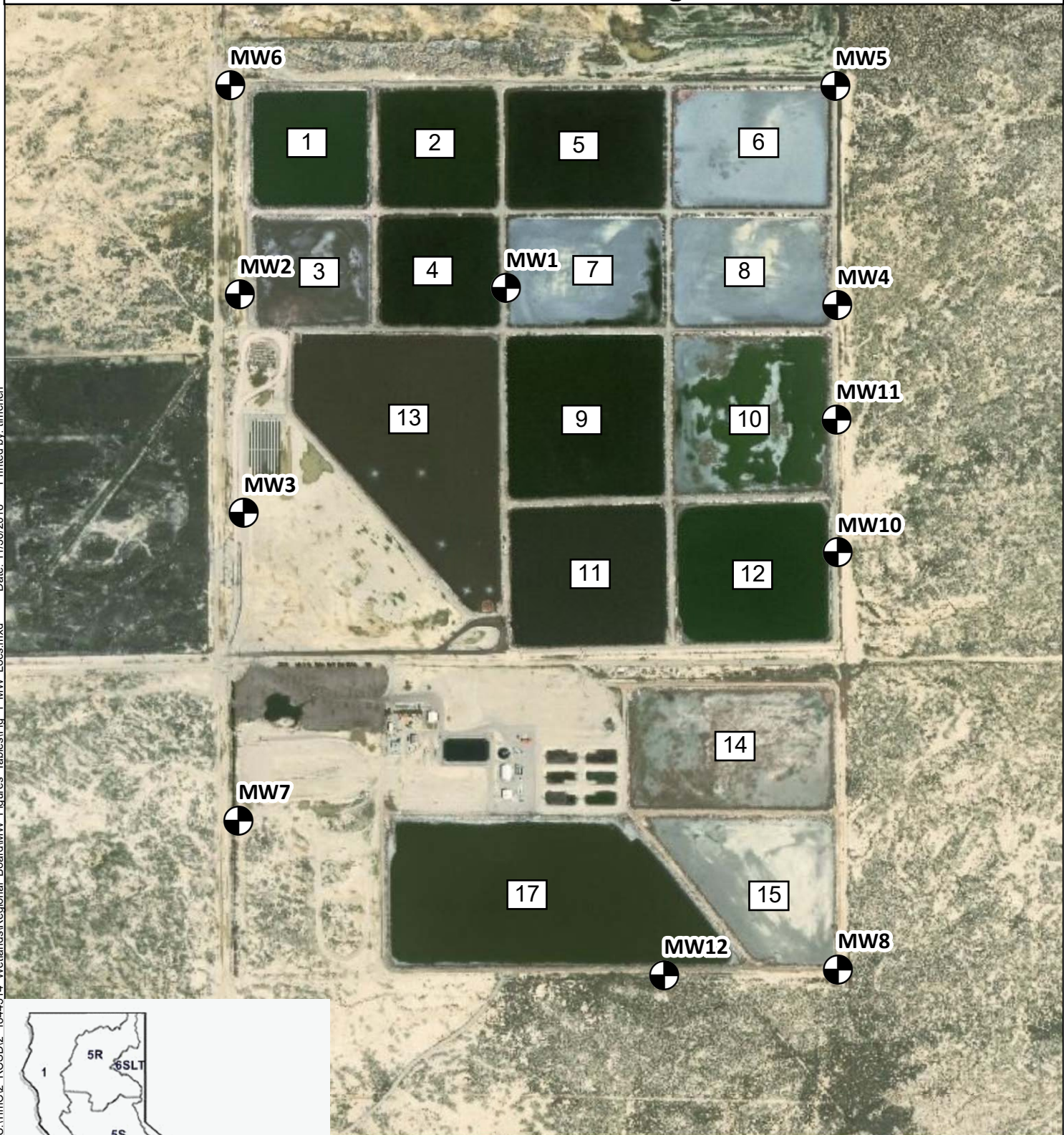
Attachment C - Rosamond CSD Facility Flow Schematic

Kennedy/Jenks Consultants
Rosamond Community Services District
Kern County, CA

RCSD WWTP Rehabilitation Project
Discharge Report

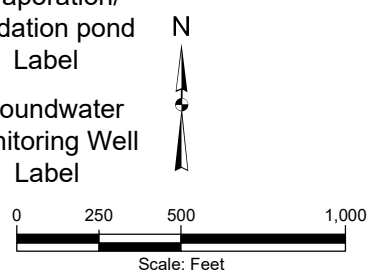
Attachment D - Rosamond CSD Wastewater Facility and Groundwater Monitoring Wells

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Evaporation/
Oxidation pond
Label

MW# Groundwater
Monitoring Well
Label



Kennedy/Jenks Consultants
Rosamond Community Services District
Kern County, CA

RCSD WWTP Rehabilitation Project
Report of Waste Discharge
Monitoring Well Locations

1844514*01
Figure 3

ATTACHMENT E

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;
- 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 owner(s) of, and discharger upon, property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements 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 waste discharge requirements shall be reported to the Regional Board. Notification of applicable waste discharge requirements 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 waste discharge requirements, 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 (\$1000) for each day of violation.
- f. If the discharger becomes aware that their waste discharge requirements 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 waste discharge requirements be rescinded.

3. Right to Revise Waste Discharge Requirements

The Board reserves the privilege of changing all or any portion of the waste discharge requirements 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 waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements 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 waste discharge requirements. 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 waste discharge requirements.

7. Waste Discharge Requirement Actions

The waste discharge requirements 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 reissuance, termination, or a notification of planned changes

or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

8. Property Rights

The waste discharge requirements 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 waste discharge requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the waste discharge requirements shall kept and maintained by the discharger and be available at all times to operating personnel.

11. Severability

Provisions of the waste discharge requirements 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 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.

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

**MONITORING AND REPORTING PROGRAM
R6V-2019-TENTATIVE
WDID NO. 6B150112001**

FOR

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

_____ Kern County _____

I. GENERAL REQUIREMENTS

A. Authorization Basis and Effective Date

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

B. California Water Code Section 13267

CWC, Section 13267 (a) states that the regional board, "*in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.*" Information requested in this MRP is necessary to establish compliance with waste discharge requirements (WDRs).

C. Summary of Reports Required

The Rosamond Community Services District (Discharger), who discharges undischarged secondary treated wastewater generated from the Rosamond Wastewater Treatment Plant (Facility) to percolation ponds, is required to submit technical or self-monitoring reports pursuant to CWC, section 13267.

Following is a summary of reports required under this program.

Summary of Required Monitoring Reports		
Report Name	Period	Report Due Date
Self-monitoring reports (include summary of unscheduled or stormwater events occurring within period)	Quarterly – due the 1 st day of second month following the quarter: January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 Aug 1 Nov 1 Feb 1 of following year
Annual report	January 1 – December 31 of prior year	March 1 each year

Summary of Required Monitoring Reports		
Report Name	Period	Report Due Date
Sampling and Analysis Plan	One time, amended as necessary	September 13, 2019
Stormwater Pollution Prevention Plan	One-time, amended as necessary	November 15, 2019
Well Installation Work Plan	One time	December 13, 2019
Well Installation Complete Report	One time	December 15, 2020
Well Installation As-Built Report	One time	February 15, 2021
Computer Groundwater Model Technical Report	One-time	August 15, 2021

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

D. Report and Correspondence Submittal

All correspondence, reports, and groundwater monitoring data shall be uploaded to the State Water Resources Control Board's (State Water Board's) GeoTracker database under Global Identification number for this site **WDR100035936**. The GeoTracker website can be accessed at the following, where you can register for an account <https://geotracker.waterboards.ca.gov/esi/login.asp>. Please contact the GeoTracker Help Desk if you have any questions. Contact information for the Help Desk is email: GeoTracker@waterboards.ca.gov, Phone: (866) 480-1028. Also send a copy to the assigned Water Board project staff.

E. 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 self-monitoring reports.

The following information shall be uploaded **one-time**, or as data are collected for any new boring(s) and groundwater monitoring well(s).

1. Boring Logs and Well Screen Intervals: Boring logs shall 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 shall be reported.
2. Locational Data: Permanent groundwater sampling locations shall be surveyed by a California registered surveyor. The surveyed locational information for these sampling points shall be submitted using the Geo_XY file.
3. Site Map: An electronic site plan map shall 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 shall be submitted when site conditions change.

The following data shall be uploaded each time a well is sampled as part of the self-monitoring report.

4. Lab Data: Analytical data (including geochemical data) for all groundwater samples that are collected for the purpose of subsurface investigation or remediation shall 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) shall be reported as elevation above mean sea level and submitted as part of the GEO_Z file.

F. General Provisions

The Discharger shall 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.

G. Reports

1. Data Tables

- a. The Discharger shall place the following data into data tables that are a function of date:
 - Influent treatment plant flow,
 - Effluent flow to specific percolation ponds,
 - Groundwater monitoring data (including field parameters),
 - Percolation pond freeboard data, and
 - Historical data for entries covering, at minimum, the last five years.
- b. The Discharger shall submit the data tables to the Water Board in one or more Microsoft Excel® files or one or more comma delimited formatted file with the portable document format (pdf) self-monitoring report submission.
- c. Where additional data are collected above minimum reporting requirements, that additional data shall be reported.

2. Laboratory Reports

- a. The Discharger shall include in the self-monitoring report all original laboratory analytical reports.
- b. For sample results greater than or equal to the laboratory's reporting limit (RL), the Discharger shall report the results as measured by the laboratory (i.e., the measured chemical concentration in the sample). When sample results are less than the reported RL, yet greater than or equal to the laboratory's Method Detection Limit (MDL), the Discharger shall report the results as "Detected, but Not Quantified (DNQ). The Discharger shall also report the estimated chemical concentration of the sample using an appropriate data qualifier (e.g., "J" flag).

3. Compliance Self-Assessment:

- a. The Discharger shall use Attachment B, or other form with the same information, as a cover letter for all reports provided to the Water Board associated with this MRP.
- b. The Discharger shall provide a written explanation for all numeric and narrative plant effluent and receiving water violations, including dates and cause of violations and measures to prevent violation reoccurrence, in each report. Include a specific assessment as to whether any data indicate a violation of receiving water quality objectives as a result of the discharge.
- c. Quarterly reports shall include graphs or charts covering the monitoring period, where appropriate, to illustrate trends (e.g., effluent and groundwater results). Annual reports shall include graphs or charts covering, at a minimum, five prior years, where appropriate, to illustrate trends (e.g., effluent and groundwater results).

II. MONITORING

Each report shall include the information specified below.

A. Flow, Operations, and Pond Conditions Monitoring

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

1. Total volume - in million gallons (MG), of flow to the facility for each day and month as measured at the head works.
2. Calculated average daily flow rate - in million gallons per day (MGD), of wastewater into the facility calculated for each month.

3. Total volume - in MG, of flow to each evaporation/oxidation pond each month, and after the compliance dates of the Board Order, to each percolation pond each month.
4. Freeboard - (vertical distance from the lowest point of a dike or invert of an overflow structure to the water surface in a pond) of each pond on the last day of the month, to the nearest ¼ foot. If a pond does not contain wastewater, the Discharger shall report that the pond is empty. Each pond or basin shall have a surveyed reference marker installed at its lowest elevation.
5. Projected Capacity – Annually, report the previous year’s annual average flow (in MGD) in comparison to the treatment plant’s rated capacity (in MGD). Report also the projected annual average flow (in MGD) for the next four consecutive years. If the projected annual average flow will reach the treatment plant’s rated capacity within four years, provide plans and time schedules stating how the Discharger will prevent flow volumes from exceeding the treatment plant’s rated capacity or propose to increase the rated capacity.
6. Report - operational problems and maintenance activities affecting plant performance, effluent discharges, or compliance with waste discharge requirements, and proposed corrective actions, and a schedule for completion of corrective actions, if needed.
7. Report - monthly visual inspections including but not limited to the Facility, treatment plant area, evaporation/oxidation ponds, percolation ponds, and monitoring well locations. If there is nothing noteworthy for a given month, then that shall be noted.

B. Septage Monitoring

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

1. Name - hauler for each load accepted.
2. Volume - septage discharged from each load.
3. Discharge point - if different than Pond 11.
4. Report - For each load, the parameters listed in the table below.

Septage Measurements		
Field Parameter ¹	Units	Frequency
pH	pH units	Per Load
Electrical Conductivity	µS/cm	Per Load

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

C. Effluent Monitoring

1. Monitor and report - plant effluent as follows:

Effluent Monitoring			
Constituent	Units	Sample Type	Frequency
Dissolved oxygen (DO) ¹	mg/L	Grab	Weekly
Electrical conductivity	Micro siemens per centimeter (µS/cm)	Grab	Weekly
pH	pH Units	Grab	Weekly
Biochemical oxygen demand (BOD) ²	mg/L	24 hr. Composite	2 X Monthly
Oil and grease	mg/L	24 hr. Composite	2 X Monthly
Total suspended solids	mg/L	24 hr. Composite	2 X Monthly
Ammonia as nitrogen	mg/L	24 hr. Composite	Monthly
Nitrate as nitrogen	mg/L	24 hr. Composite	Monthly
Nitrite as nitrogen	mg/L	24 hr. Composite	Monthly
Total Kjeldahl nitrogen	mg/L	24 hr. Composite	Monthly
Total nitrogen ³	mg/L	Calculated	Monthly
Methylene blue active substances	mg/L	Grab	Monthly
Phenol	mg/L	Grab	Monthly
Total dissolved solids ⁴	mg/L	24 hr. Composite	Monthly
General minerals series ⁵	(varies)	Grab	Annually
Metals series ⁶	µg/L	Grab	Annually
Semi-volatile organic compounds	µg/L	Grab	Annually
Total cyanide	µg/L	Grab	Annually
Volatile organic compounds	µg/L	Grab	Annually

¹ If DO is below 1.0 mg/L during three consecutive sampling events, the Discharger shall take appropriate action to increase DO and commence daily monitoring until the problem is resolved.

² 5-day BOD at 20°C.

³ Sum of nitrate as nitrogen, nitrite as nitrogen, and total Kjeldahl nitrogen.

⁴ Annual general minerals analysis includes this constituent.

⁵ See General Minerals Analysis Table below.

⁶ See Metals Analysis Table below.

2. Field tests - may be accomplished by site personnel with a direct read instrument calibrated per manufacturer's specifications prior to sampling. All samples other than field measurements shall be conducted by a California-certified laboratory and a United States Environmental Protection Agency (USEPA) analytical method or accepted standard method. An alternate method may be proposed and used if acceptable to the Water Board Executive Officer.

E. Pond Monitoring

1. Permanent marker - shall be placed in the treatment basins, septage pond, emergency overflow pond, and percolation ponds with marked reference to the

lowest surveyed pond dike or berm surface elevation. The evaporation/oxidation ponds will use existing markers until they are no longer in use. The marker shall have calibrations indicating water level at the design capacity and available freeboard.

2. Monitoring - at least on the following periods and results shall be reported quarterly.

Percolation Pond Monitoring			
Constituent/Parameter	Units	Sample Type	Frequency
DO	mg/L	Grab ¹	Monthly
Freeboard	Feet	Observation	Monthly

¹ DO shall be measured before noon and shall be taken at the opposite end of the pond inlet at a depth of approximately one foot.

3. Inspection – in-service evaporation/oxidation ponds and percolation ponds holding water shall be inspected monthly and report visual observations in quarterly report. Notation shall include weed growth along the banks and their location, grease, dead algae, vegetation, scum, or debris accumulation on the storage pond and any animal burrows and their locations as well as color of reservoirs (i.e. dark, green dull green, yellow, brown, etc.), and summary of any action taken to correct any observed problem.
4. Report – In-service evaporation/oxidation ponds, percolation ponds, or septage pond maintenance activities during the monitoring period.

F. Groundwater Monitoring

The Discharger has installed 11 groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11, and MW-12) to investigate historical releases of nitrogen to groundwater around the existing evaporation/oxidation ponds and treatment plant facility. This MRP requires the Discharger to install additional groundwater monitoring wells to determine the nature, extent and magnitude of historical releases and to determine compliance with the Board Order. The existing well locations are provided in Attachment A of the WDRs. Locations for additional wells are dependent upon approval of a work plan. The general locations for additional wells are shown in Attachment C of this MRP.

1. Monitoring Wells - to be Sampled and Frequency

Quarterly groundwater samples shall be obtained from the existing 11 monitoring wells and any newly installed wells. The samples shall be analyzed to determine the concentration of the parameters listed in the table below. Additional new wells required by this order shall be sampled a minimum of quarterly for the first 8 sampling events to collect sufficient information to establish a statistically significant current groundwater quality concentration.

2. Constituents - to be Sampled and Frequency

When monitoring wells are sampled for constituents, the following constituents should be analyzed. Monitoring wells that are sampled annually shall have all constituents sampled.

Groundwater Monitoring Constituents			
Constituent	Units	Sample Type	Frequency
Ammonia as nitrogen	mg/L	Grab	Quarterly
Nitrate as nitrogen	mg/L	Grab	Quarterly
Total dissolved solids ¹	mg/L	Grab	Quarterly
Total Kjeldahl nitrogen	mg/L	Grab	Quarterly
Total nitrogen ²	mg/L	Grab	Quarterly
General minerals series ³	(varies)	Grab	Annually – starting third quarter of 2019
Metals series ⁴	µg/L	Grab	Annually – starting third quarter of 2019
Volatile organic compounds	µg/L	Grab	Annually – starting third quarter of 2019

¹ Annual general minerals include this constituent.

² Sum of nitrate as nitrogen, nitrite as nitrogen, and total Kjeldahl nitrogen (TKN).

³ See General Minerals Analysis Table below.

⁴ See Metals Analysis Table below.

3. Field Parameters - as described in the table below, shall be determined in each monitoring well each time it is sampled as part of well purging. The final field parameters at the end of sample collection shall be recorded in a table and reported with laboratory analytical data.

Groundwater Field Measurements	
Parameters	Units
Color	Visual
DO	mg/L
Electrical conductivity	µS/cm
pH	pH units
Static water depth	Feet below ground surface (fbgs)
Temperature	Degrees Celsius
Turbidity	Nephelometric turbidity units (NTU)

4. General Minerals Analysis - use the following list:

General Minerals Analysis	
General Minerals	Value
Cations	
Calcium	mg/L
Magnesium	mg/L
Potassium	mg/L
Sodium	mg/L
Anions	
Bicarbonate	mg/L
Carbonate	mg/L
Chloride	mg/L
Fluoride	mg/L
Nitrate as nitrogen	mg/L
Sulfate	mg/L
Calculated Constituent	
Anion sum	meq/L
Cation sum	meq/L
Total alkalinity	mg/L
Total Hardness	mg/L
General Constituent	
Electrical conductivity	µS/cm
pH	pH units
TDS	mg/L

5. Metals Analysis - use the following list:

Metals Analysis	
Constituent	Units
Aluminum	µg/L
Arsenic	µg/L
Barium	µg/L
Cadmium	µg/L
Total chromium	µg/L
Cobalt	µg/L
Copper	µg/L
Iron	µg/L
Lead	µg/L
Mercury	µg/L
Molybdenum	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L

Metals Analysis	
Constituent	Units
Thallium	µg/L
Vanadium	µg/L
Zinc	µg/L

6. Well Purging Method - describe the well purging method for each groundwater monitoring well sample event. The preferred method is low flow purging and sampling procedures as described by the USEPA to minimize drawdown when collecting samples.
<https://www.epa.gov/sites/production/files/2015-06/documents/EQASOP-GW001.pdf>
7. Scaled Groundwater Iso-Contour Elevation Map - show quarterly groundwater level elevation above mean sea level to the nearest 1 foot and iso-concentration map showing nitrate concentrations (5, 6.5, 10, 15, and 20 mg/L contours) overlaid with groundwater elevations and groundwater flow direction(s) on maps at an appropriate scale. A California State licensed civil engineer or professional geologist shall prepare and approve the contour map.
8. Location Map - include a map showing well locations, groundwater elevation contours with respect to mean sea level, groundwater flow direction and gradient.
9. Trend Analysis - For any groundwater monitoring wells, complete a trend analysis after at least four samples from wells are collected to calculate existing water quality. Submit calculated results in the first self-monitoring report after at least four samples are collected. In subsequent reports, provide a comparison of the groundwater constituent concentrations to background water quality using any of the parametric or non-parametric trend analysis methods described in the *USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*, and latest edition.
10. Well Repairs - When groundwater monitoring wells shall be repaired, replaced, destroyed, or installed, a Work Plan shall be prepared under the supervision of and signed, stamped by a California licensed Professional Geologist or by a Professional Civil Engineer with competence in groundwater hydrogeology and submitted to the Water Board for acceptance prior to the beginning of any work.
11. Well Standards - Groundwater monitoring wells shall be installed according the California Well Standards, California Department of Water Resources Bulletins 74-81 and 74-90.
12. Investigations - Guidance for conducting groundwater investigations including representative sampling of groundwater; drilling, logging and sampling; and well design and construction may be found on the web site of the Department of Toxic

Substances Control at:

http://www.dtsc.ca.gov/PublicationsForms/prog_pubs.cfm?prog=Site%20Cleanup

G. Biosolids Monitoring

The Discharger shall report annually, the following for the previous year:

1. Total volume - biosolids generated at the wastewater treatment plant.
2. Location(s) and address(s) - of the site(s) where biosolids were transported (i.e., landfills, agriculture sites, or composting facilities).

H. Pretreatment Source Control

In the Annual Report, the following information related to the Discharger's pretreatment program to satisfy, in part, federal requirements contained in Code of Federal Regulations (CFR), Title 40, Part 403 (40 CFR 403) shall be reported.

1. Inventory - significant users, including names, addresses, categories, industrial pollutants, and volumes. A significant industrial user is either:
 - a. An industrial user discharging more than 25,000 gallons per day;
 - b. A categorical industrial user defined in 40 CFR 400 – 471;
 - c. A use that can cause upset, pass through, or interference to the wastewater treatment system; or
 - d. Any industrial user using acidic or metallic material discharges to the collection system without treatment.
2. Discuss - upset, interference, or pass through incidents, if any, at the treatment plant which the Discharger knows or suspects was caused by industrial discharges into the collection system.
3. Discuss - enforcement actions taken or proposed for industrial users.
4. Discuss - summary of the pretreatment and/or source control functions including, but not limited to:
 - a. Legal authorities;
 - b. Pretreatment source control requirements;
 - c. Status of funding and personnel to implement the pretreatment source control program;
 - d. Summary of sampling location, laboratory data analyses required by the Discharger before the discharge to collection system from the industrial uses;
 - e. Summary of inspections completed; and
 - f. Summary of complaints received, and any action taken.

I. Storm Water Monitoring and Reporting Program

Waste in discharges of storm water shall be reduced or prevented to achieve the best practicable treatment level using controls, structures, and best management practices (BMPs). At minimum, the Discharger shall: develop and implement a site-specific storm water pollution prevention plan (SWPPP); conduct monitoring, including visual observations and periodic collection of samples for analytical analysis; evaluate storm water monitoring data; implement appropriate response actions when monitoring data indicate non-compliance with the storm water monitoring program; and provide annual reports to the Water Board.

1. Storm Water Pollution Prevention Plan

By **November 15, 2019**, the Discharger shall develop, implement, and submit a copy to the Water Board, a site-specific SWPPP that contains, at minimum, the following elements. A copy of the SWPPP (and amendments thereto) shall be maintained at the Facility and be available to site personnel at all times. Report all stormwater events in the quarterly self-monitoring report.

a. Facility Contact Information

List all site contacts including those persons responsible for assisting with the implementation of the SWPPP.

b. Site Map

Include a site map illustrating: the Facility boundary; all storm water drainage areas within the Facility and the flow direction of each drainage area; locations of storm water collection and conveyance systems, including associated discharge locations and directions of flow; locations of storm water monitoring points; locations of structural control measures that affect run-on; and locations of all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

c. List of Industrial Materials

List all industrial materials handled at the Facility, the locations where each material is stored and handled, as well as the typical quantities and handling frequency.

d. Potential Pollutant Sources

Describe all potential pollutant sources including industrial processes, material handling and storage areas, dust and particulate generating activities, non-storm water discharges, and erodible surfaces.

e. Best Management Practices

Provide a narrative description of each minimum and/or advanced BMP being implemented at the Facility, as well as a summary table that identifies each area of industrial activity, the associated pollutant sources and pollutants, and the specific BMPs being implemented.

The following minimum BMPs shall be implemented and maintained to reduce or prevent pollutants in industrial storm water discharges: good housekeeping; preventative maintenance; spill and leak prevention response; material handling and waste management; erosion and sediment controls; an employee training program; and quality assurance and record keeping.

Advanced BMPs may be necessary to reduce or prevent discharges of pollutants in storm water discharges in a manner that reflects best industry practice considering technological availability and economic practicability and achievability. Advanced BMPs may include but are not limited to: exposure minimization BMPs; storm water containment and discharge reduction BMPs; treatment control BMPs; or other advanced BMPs based on site-specific criteria.

2. Storm Water Monitoring

The SWPPP shall include a storm water monitoring plan that includes the following elements.

a. Monitoring Points

Storm water discharge monitoring locations shall be selected such that samples collected are representative of storm water discharge leaving each drainage area identified for the Facility. The storm water discharge monitoring locations shall be identified on the site plan in the SWPPP.

b. Storm Water Sampling and Thresholds

The Discharger shall collect storm water samples, from each storm water discharge monitoring location, from each qualifying storm event, and analyze for all monitoring parameters described below and compare the results to the water quality thresholds.

STORM WATER MONITORING		
Parameter	Units	Water Quality Thresholds
Iron, dissolved	mg/L	Storm water discharges shall not contain dissolved iron at concentrations in excess of 1.0 mg/L.
Oil and grease, total	mg/L	Storm water discharges shall not contain oils and greases at concentrations in excess of 15 milligrams per liter (mg/L).
pH	pH units	Measured pH shall not be lower than 6.0 nor greater than 9.0.
Turbidity	NTUs	Storm water discharges shall not exceed 500 nephelometric turbidity units (NTUs).

Analytical Methods - All storm water samples, with the exception of pH, are to be analyzed by a California state-certified laboratory using the most recently approved SW-846 USEPA method or other equivalent USEPA method. An alternate method may be proposed and used if acceptable to the Executive Officer.

Qualifying Storm Event – A qualifying storm event is a precipitation event that produces a storm water discharge for at least one drainage area and is preceded by 48 hours with no discharge from any drainage area. Samples shall be collected from two qualifying storm events during each semi-annual period (January 1 – June 30 and July 1 – December 31). If enough qualifying storm events do not occur within a given year, document and report that information in reports.

c. Visual Observations

Monthly, the Discharger shall visually observe and document, during normal operating hours, each drainage area for the following: the presence or indications of prior, current, or potential non-storm water discharges and their sources; authorized non-storm water discharges, their sources, and associated BMPs; and all potential pollutant sources.

Visual observations shall also be conducted at the same time that storm water sampling occurs. At the time a storm water sample is collected, the Discharger shall observe and document the discharge for the following.

- i. Visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.
- ii. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.

d. Calibration Documentation

Annually, the Discharger shall submit documentation of instrument calibration and performance checks to verify proper operation of any field monitoring equipment.

3. Storm Water Data Evaluation and Response Actions

The storm water monitoring data (storm water sampling and analytical data and visual observations) shall be evaluated to determine the following: the effectiveness of BMPs in reducing or preventing pollutants in the storm water discharges; compliance with the monitoring parameter water quality thresholds; and the need to implement additional BMPs and/or SWPPP revisions.

The results of all storm water sampling and analytical results from each distinct sample shall be directly compared to the water quality threshold for the corresponding monitoring parameter. An exceedance of one or more water quality threshold requires the Discharger to implement the following response actions:

- a. The Discharger shall notify the Water Board verbally or via email within 30 days of obtaining laboratory results whenever a determination is made that a water quality threshold is exceeded for one or more storm water monitoring parameters;
- b. Identify the pollutant sources that may be related to the exceedance and whether the BMPs in the SWPPP have been properly implemented and perform BMP maintenance, if necessary;
- c. Assess the SWPPP and its implementation to determine whether additional BMPs or SWPPP measures are necessary to reduce or prevent pollutants in storm water discharges; and
- d. Revise or amend the SWPPP, as appropriate, to incorporate the additional BMPs or SWPPP measures necessary to reduce or prevent pollutants in storm water discharges and implement the revised SWPPP no later than 60 days following the reported exceedance; or
- e. Demonstrate, to the satisfaction of the Executive Officer, that the exceedance(s) is attributed solely to non-industrial pollutant sources and/or to natural background sources.

III. ROUTINE REPORTS

A. Quarterly Reports

Quarterly self-monitoring reports are due on the 1st day of the second month following the end of each quarterly monitoring period in accordance with the Reports Required table in MRP, Section I.C. Each quarterly report shall provide information on:

1. General operations,
2. Operational problems,
3. Compliance assessment,
4. Data from the monitoring section of this program,
5. Any problem with industrial pretreatment discharge to collection system causing collection system deterioration or upset in wastewater treatment system, and
6. Monitoring data required for pilot project and groundwater cleanup.

B. Annual Report

The Discharger shall submit an **Annual Report by March 1** of each year that covers the period from January 1 through December 31 of the previous calendar year and shall, as a minimum, include the following.

1. Facility site map showing treatment plant, disposal, and monitoring well locations.
2. Graphs and tables of static groundwater elevation and key constituent concentrations versus time for each monitoring well. Include data for the previous 5 years of measurement, at a minimum.
3. Graphs and tables showing long-term trends in effluent concentrations for the following constituents: flow, BOD, ammonia, nitrate, TKN, total nitrogen, TDS, and TSS. Include data for the previous 5 years of measurement, at a minimum.
4. Compliance record and corrective actions taken or planned to bring the Discharger into full compliance with waste discharge requirements.
5. Modifications or additions, or major maintenance conducted on flow measuring equipment, treatment, or disposal facilities during the past year. If none, then so state.

6. Analysis of groundwater quality trends with respect to receiving water quality objectives comparing upgradient and downgradient wells. Include data for the previous 5 years of measurement, at a minimum.
7. Names and grades of all certified operators.

C. Sampling and Analysis Plan

By **September 13, 2019**, pursuant to General Provisions No. 1.d of the General Provisions for Monitoring and Reporting, please submit a revised Sampling and Analysis Plan (SAP). The SAP shall include a detailed description of procedures and techniques for:

1. Sample collection method, sample locations, including purging techniques, sampling equipment, and decontamination of sampling equipment,
2. Measurement of static groundwater levels and depths of wells,
3. Groundwater well purging methods,
4. Groundwater well sample collection methods,
5. Sample preservation and shipment,
6. Analytical methods and procedures,
7. Chain of custody control,
8. Quality assurance and quality control (QA/QC) methods,
9. Frequency of calibration for any onsite field equipment or flow meters, and
10. Description of how onsite measurements are performed.

The Discharger shall also keep the most recent version of the SAP at the plant and accessible to personnel performing sampling and analyses. The SAP is subject to review during the Water Board's plant compliance inspections.

D. Computer Groundwater Model Evaluation

By **August 15, 2021**, following installation of new groundwater monitoring wells required below to delineate the vertical and lateral nature and extent of groundwater pollution, the Discharger shall provide a technical report describing the results of a computer groundwater model analysis of groundwater flow and contaminant transport of nitrate and TDS plumes in the groundwater surrounding the Facility. Include future plume predictions based on the most recent set of groundwater data.

The current estimated distribution of TDS is shown on Attachment C. The technical report should include, as a minimum, the following information.

1. Description of modeling objectives.
2. Description of the hydrogeologic site conceptual model.
3. Description of lithologic unit and aquifer parameters.
4. Description of computer groundwater model tool and model domain.
5. Description of model calibration.
6. Description of current groundwater contaminant vertical and horizontal nature and extent.
7. Predicted movement of contaminant plumes.
8. Predicted time frame for achieving receiving groundwater quality objectives for nitrate and TDS.
9. Proposed methods of model validation.
10. Recommended alternatives to reduce the time frame for achieving receiving groundwater quality objectives for nitrate and TDS and/or protecting human and ecological risk to sensitive receptors.

IV. NEW MONITORING WELLS

Pursuant to the California Water Code, section 13267, the Discharger shall submit to the Water Board work plans for installing additional groundwater monitoring wells to establish the nature, extent, and depth of polluted or degraded groundwater from historical Facility discharges and to determine compliance with the Board Order.

A. Time Schedule

The wells should be installed according to the time schedule described below.

Groundwater Monitoring Well Installation Time Schedule	
Period	Task
December 13, 2019	a. Submit a Work Plan and implementation schedule for the Executive Officer's acceptance, 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.
December 15, 2020	b. Complete monitoring well installation and notify Water Board staff.

Groundwater Monitoring Well Installation Time Schedule (Continued)	
Period	Task
February 15, 2021	c. Submit As-Built Well Completion Report, initial analytical data, and the California Department of Water Resources Well Drillers Reports.

B. New Monitoring Well Objectives

1. Additional groundwater monitoring wells shall be established beyond the foot print of the 11 existing wells to establish the full lateral and vertical extent of groundwater pollution at the Facility and to determine compliance with the Board Order.
2. Wells should be installed at an appropriate distance between the current groundwater monitoring wells and the nearest water supply wells located northwest, west, southwest, and south of the facility to evaluate the impact or potential impact on nearby drinking water wells.
3. Because the Facility is immediately adjacent to Edwards Air Force Base, reasonable effort shall be made to establish the extent of elevated nitrate and TDS concentrations within the base boundary.
4. Monitoring wells shall establish “first encountered groundwater” to determine background and/or existing groundwater quality.
5. To establish the vertical extent of elevated nitrate and TDS, nested wells with well screens at multiple depths shall be proposed.
6. Reasonable effort shall be made to procure current nitrate and TDS concentrations from nearby supply wells and the construction details of those wells.
7. The placement of new wells shall consider the long-term impacts of secondary treated effluent disposed by percolation.
8. Data collected from the new, as well as existing wells, should provide information to validate computer groundwater models for nitrate and TDS plume movement over time.
9. An appropriate location shall be selected to represent background groundwater quality for the Facility.

C. Work Plan

Well construction shall comply with California Well Standards, California Department of Water Resources Bulletins 74-81 and 74-90. All appropriate Kern County well permits shall be obtained prior to well installation. Wells shall be completed in the first encountered groundwater or nested, as appropriate. The Work Plan shall be signed by a California licensed Civil Engineer or Professional Geologist and specify the following.

1. Well locations,
2. Well design including casing diameter and material,
3. Proposed well screen interval, slot size, total depth,
4. Drilling method,
5. Waste handling and disposal,
6. Well development method,
7. Well sample purging methods,
8. Well sampling procedures,
9. Initial water quality constituent analyses to include all constituents in tables found in MRP, Section II.F, and
10. Plan to collect a sufficient number of samples of existing groundwater wells to determine aquifer water and background water quality.

D. Well Completion Report

Well Completion Reports shall include the following.

1. Signature and stamp of a California Licensed Professional Civil Engineer or Professional Geologist indicating that well installation was completed per the proposed Work Plan and if any deviations occurred.
2. Copies of all Well Completion Reports filed with the California Department of Water Resources in accordance with the California Water Code, section 13750 et seq.
3. Initial water quality sample results, including field data sheets and all laboratory analytical reports.
4. Well survey completed and signed by a California registered surveyor indicating the well coordinate locations, top of casing elevations and ground surface elevations.
5. Copies of Kern County well permits per California Water Code, section 13751.
6. A map showing the locations of all monitoring wells at the site, any nearby water supply wells, and other plant site features including: head works, land ownership boundaries, the secondary plant, sludge drying beds, and percolation ponds.

7. Initial groundwater elevation contour map showing the locations of all monitoring wells at the site, nearby water supply wells, and static groundwater elevations.
8. Groundwater iso-concentration plume maps for nitrate and TDS.

D. Calculated Groundwater Quality

1. Existing groundwater quality shall be identified based on a minimum of at least four sampling events. The general guidelines for calculating background/existing quality shall be equal to the upper 99% confidence interval for the first four nitrate samples (minimum sample size) collected from the well.
2. Trend analyses shall be performed for TDS and nitrate as nitrogen in all monitoring wells to determine whether concentrations are increasing and included in all submitted self-monitoring reports. Increasing, stable, or decreasing trends in groundwater monitoring data shall be explained according to the USEPA Unified Guidance (see MRP, Section II.F.9 for reference).
3. Trend analysis results for all monitoring wells shall be included in the Annual Report.

Ordered by: _____
PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Dated: _____

- Attachments:
- A. General Provisions for Monitoring and Reporting, dated September 1, 1994
 - B. Cover Form for Self-Monitoring Reports
 - C. Rosamond CSD – Current Estimated TDS Distribution

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
15095 Amargosa Road
Building 2, Suite 210
Victorville, CA 92394

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.

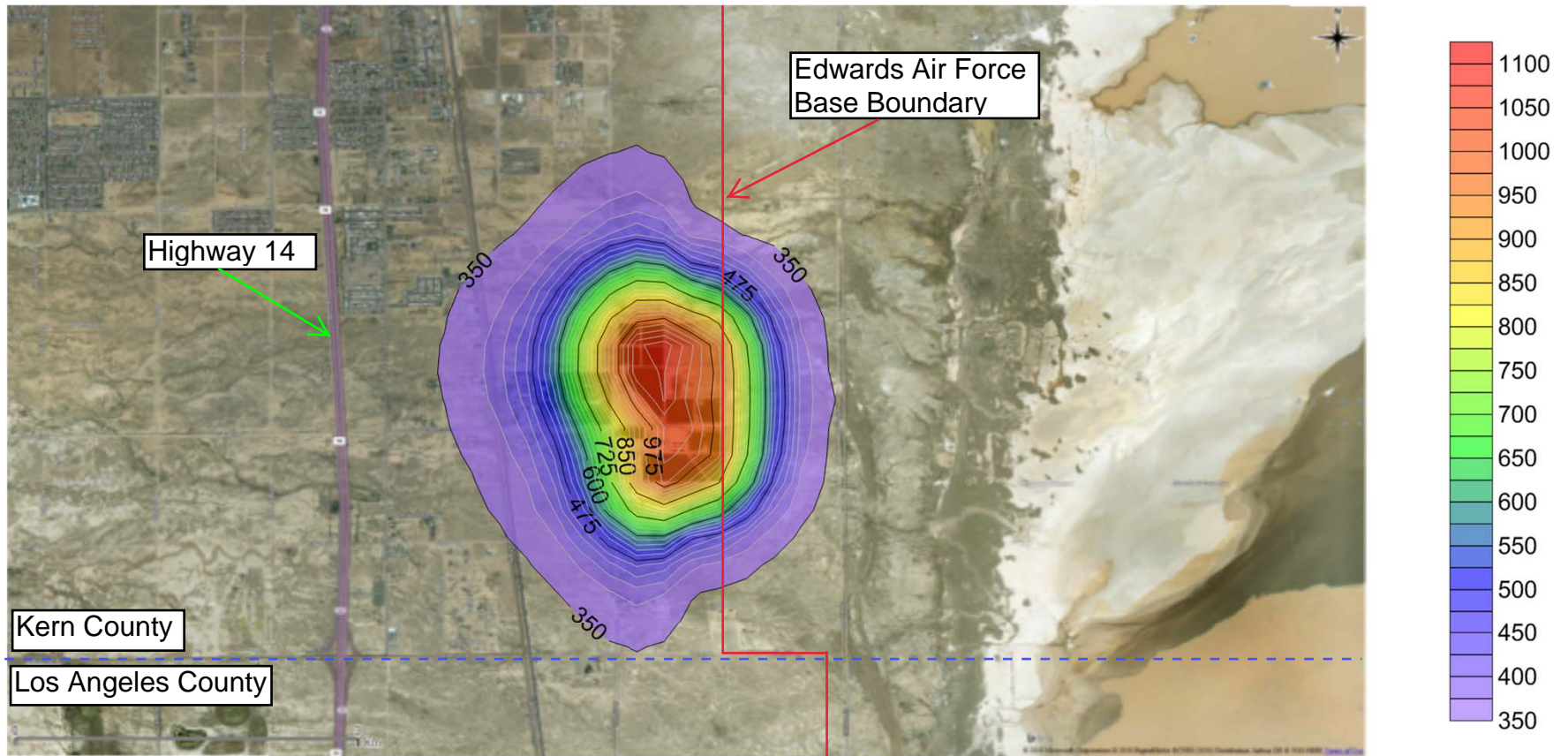
If you have any questions or require additional information, please contact _____ at the number provided above.

Sincerely,

Signature: _____

Name: _____

Title: _____



Scale = meters

Modeled Distribution of Current TDS Concentrations (mg/L) in Groundwater

Attachment C - Rosamond CSD Current Estimated TDS Distribution