

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

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ORDER R7-2021-0023



Order Information

Discharger: Big Bear Regional Wastewater Agency
Facility: Export of Recycled Water to Lucerne Valley
Address: 122 Palomino Drive,
Big Bear City, California 92314
County: San Bernardino County
WDID: 7A360100011
GeoTracker ID: WDR100027897

I, PAULA RASMUSSEN, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 11, 2021.

Original signed by

PAULA RASMUSSEN
Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER R7-2021-0023

WASTE DISCHARGE REQUIREMENTS
FOR
BIG BEAR AREA REGIONAL WASTEWATER AGENCY, OWNER/OPERATOR
EXPORT OF RECYCLED WATER TO LUCERNE VALLEY
LUCERNE VALLEY-SAN BERNARDINO COUNTY

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) hereby makes the following Findings:

1. Big Bear Area Regional Wastewater Agency (BBARWA or Discharger), P.O. Box 517, Big Bear City, California 92314, owns 480 acres in the Lucerne Valley, of which 340 acres are irrigated with recycled water from the Discharger's Wastewater Treatment Plant (WWTP). There are an additional 140 acres available for irrigation, also in the Lucerne Valley. BBARWA's WWTP provides sewerage service to the City of Big Bear Lake, Big Bear City Community Services District, and County Service Area 53-B. The WWTP is located at 122 Palomino Drive, Big Bear City, California 92314, and has a design treatment capacity of 4.89 million gallons-per-day (MGD) and a hydraulic capacity of 9.2 MGD. The Facility is assigned California Integrated Water Quality System (CIWQS) number CW-208930, Waste Discharge Identification (WDID) number 7A360100011, and GeoTracker Global Identification number WDR100027897.
2. The WWTP is located outside the boundary of the Colorado River Basin Water Board (Regional Water Board) and is regulated by the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) under Waste Discharge Requirements (WDRs) Order R8-2005-0044.
3. The WWTP has the following types of treatment: preliminary treatment, secondary treatment, and sludge drying and treatment. Secondary treated wastewater from the WWTP is disposed of through three possible discharge points that are designated in Order R8-2005-0044 as Point 001, Point 002, and Point 003. The discharges from the WWTP at Points 002 and 003 are regulated by the Santa Ana Regional Water Quality Control Board. The majority of the treated wastewater is discharged through Discharge Point 001 into the Lucerne Valley to irrigate fodder, fiber, and seed crops. A minimal volume of treated wastewater is discharged through Points 002 and 003 for recycling and reuse at various sites for irrigation, dust control at construction sites, and wildlife habitat restoration in the Baldwin Lake.
4. This Order regulates the discharge from the WWTP at Point 001. Infrastructure associated with this discharge includes a concrete-lined reservoir and two overflow

ponds that are used to dispose of treated recycled wastewater by percolation and evaporation in the Lucerne Valley (Lucerne Valley Facility or Facility).

5. The Lucerne Valley Facility is located near the intersection of State Highway 247 (Old Woman Springs Road) and Camp Rock Road in the Lucerne Valley of San Bernardino County in Section 14, T4N, R1E, SBB&M, and Assessor's Parcel Number (APN) 0449-082-040000, 34.438554°N Latitude, -116.851225°W Longitude. The Facility's location is shown in **Attachment A-** Vicinity Map, made part of this Order by reference.
6. The Lucerne Valley Facility was most recently regulated by WDRs in Order R7-2016-0026, which was adopted by the Regional Water Board on June 30, 2016.
7. On October 28, 2020, the Discharger submitted an application and Report of Waste Discharge (ROWD) to the Regional Water Board, applying for updated WDRs for the Facility.
8. This Order updates the WDRs to comply with current laws and regulations applicable to the discharge. Accordingly, this Order supersedes WDRs in Order R7-2016-0026 upon the effective date of this Order, except for enforcement purposes.

Wastewater Treatment Facility and Discharge

9. Wastewater that is discharged at the Lucerne Valley Facility goes through preliminary and secondary treatment at the WWTP before it is sent via gravity to the concrete reservoir at the Lucerne Valley Facility. The WWTP components that are used for treatment are described below and the Process Flow Diagram for the WWTP is shown in **Attachment B**—Process Flow Diagram.
 - a. **Preliminary Treatment.** Untreated wastewater flows to the preliminary treatment system, which consists of bar screens, aerated grit chamber with grit washer, and a flow bypass channel. This treatment stage removes screenings, rag material, and grit.
 - b. **Secondary Treatment.** Effluent flows by gravity from the preliminary treatment system to three parallel oxidation ditches for secondary (biological) treatment and timed processes for nutrient (nitrogen) removal. The number of ditches in operation depends on the seasonal fluctuations of the influent flow. The effluent from the oxidation ditches flows into a system of three secondary clarifiers for removal of floatable and settleable solids/materials. The secondary treated effluent flows to two cement-lined balancing chambers and then flows to equalization storage ponds at the WWTP until pumped for offsite irrigation disposal.
 - c. **Offsite Irrigation/Disposal.** Undisinfected secondary treated wastewater is pumped from the WWTP's main pump building (5.2 MGD) or auxiliary

pump building (9.2 MGD) approximately 16.5 miles to an offsite 2.26-million-gallon, concrete-lined reservoir (undisinfected secondary recycled water reservoir). This reservoir is located one mile south of the irrigation site. Wastewater from the reservoir flows by gravity through an outfall line connected to the irrigation system. In the event of an overflow at the concrete-lined reservoir, the wastewater flows by gravity to earthen overflow ponds located adjacent to the irrigation site.

10. Approximately 2.12 MGD of undisinfected secondary recycled water (as defined in California Code of Regulations, title 22, section 60301.900) is discharged to the Lucerne Valley Facility for irrigation of fodder and fiber crops. Undisinfected secondary wastewater was approved by the California Department of Public Health (succeeded by the State Water Resources Control Board's [State Water Board] Division of Drinking Water) for irrigation use at this site. Approximately 340 acres are currently irrigated at the Lucerne Valley Facility, with an additional 140 acres available for irrigation at the site. The effluent discharge limit of 4.8 MGD in this Order is based on the capacity of the irrigated crops to take up nitrogen. The Lucerne Valley Facility site layout is shown in **Attachment C**, made part of this Order by reference.
11. The State Water Board's Division of Drinking Water has established statewide reclamation criteria in California Code of Regulations, title 22, section 60301 et seq. for the use of recycled water and developed guidelines for specific uses. Section 60304(d)(4) allows the use of undisinfected, secondary recycled water for the surface irrigation of fodder and fiber crops and pasture for animals not producing milk for human consumption. BBARWA's Title 22 Engineering Report was initially approved on November 3, 1980 and was last updated November 4, 1998, to allow for the use of tertiary treated wastewater in the Big Bear Area.
12. The grazing of sheep on the irrigation site has been allowed under certain conditions, as outlined in a letter from Regional Water Board staff dated November 15, 1994, and in Discharge Specification D.18 of this Order.
13. No sewage sludge is discharged at the recycled water reuse site.
14. BBARWA's Self-Monitoring Reports (SMRs) from January 2016 through December 2020 characterize the WWTP effluent as follows:

Table 1. Effluent Characterization

Constituent	Units	Average	Maximum	Minimum
Flow	MGD	2.12	8.39	0.441

Constituent	Units	Average	Maximum	Minimum
20° C BOD ₅ ¹	mg/L ²	8	36	ND ³
TSS ⁴	mg/L	8	44	1
pH	s.u. ⁵	7.61	8.46	6.85
Total Dissolved Solids (TDS)	mg/L	441	520	350
Total Inorganic Nitrogen (TIN) ⁶	mg/L	3.9	22.3	0.4
Total Nitrogen (TN)	mg/L	4.9	12	1.8
Nitrate as N	mg/L	1.7	7.7	0.04
Chloride	mg/L	56	87	34
Sulfate	mg/L	40	48	29
Fluoride	mg/L	0.43	0.61	0.24
Boron	mg/L	0.20	0.32	<0.1

Hydrogeologic Conditions

15. Lucerne Valley Groundwater Basin underlies Lucerne and North Lucerne Valleys and is bounded on the south by the San Bernardino Mountains and on the west by the Granite Mountains and the Helendale fault. The Ord Mountains bound the basin on the north. The Camp Rock fault and Kane Wash Area Groundwater Basin bound this basin on the east and the Fry Mountains bound this basin on the southeast. Parts of the eastern and southeastern boundaries are surface drainage

¹ 5-day biochemical oxygen demand at 20 degrees Celsius.

² Milligrams per Liter

³ Not Detected at the laboratory's Reporting Limit.

⁴ Total Suspended Solids

⁵ Standard pH units

⁶ Total Inorganic Nitrogen is the sum of nitrate, nitrite, and total ammonia.

divides. Surface water drains toward Lucerne (dry) Lake in the western portion of the basin, which has an altitude of 2,850 feet above sea level (Schaefer 1979⁷).

16. The principal water-bearing deposits are Quaternary age alluvium, and dune sand. The deposits are unconsolidated or semi-consolidated and the alluvium is composed of gravel, sand, silt, clay, and occasional boulders. Where saturated, the alluvium yields water freely to wells. The average specific yield for these deposits is 11 percent. Irrigation wells in the basin yield as much as 1,000 gallons per minute (Schaefer 1979).
17. BBARWA has three groundwater monitoring wells (MW-1-upgradient; MW-2-downgradient; and MW-3-downgradient). Groundwater levels in monitoring wells have increased since the wells were constructed in 1991. BBARWA has reported that the depth to groundwater at the Lucerne Valley Facility is within the range of 125 to 175 feet below ground surface (bgs) and groundwater flow direction is generally to the northwest, towards Lucerne Dry Lake.
18. Groundwater monitoring data collected from monitoring wells MW-1, MW-2, and MW-3 during the period from 2017 through 2020 show the following average characteristics:

Table 2. Groundwater Monitoring Data

Constituent	Units	MW-1	MW-2	MW-3
Depth to Groundwater	ft	170	125.2	138.1
TDS	mg/L	435.5	655.2	583
TN	mg/L	9.54	15.1	15.9
Nitrate as N	mg/L	8.97	14.5	15.4
Sulfate	mg/L	62.1	138.4	179.7
Chloride	mg/L	70.3	123.4	109.1
Fluoride	mg/L	0.19	0.14	0.24
Boron	mg/L	0.12	0.11	0.09
VOCs	ug/L	ND	ND	ND

⁷ Schaefer, D.H. 1979. *Ground-Water Conditions and Potential for Artificial Recharge in Lucerne Valley, San Bernardino County, California*. U.S. Geological Survey Water Resources Investigations 78-118. 37 p.

19. Annual precipitation in the Lucerne Valley region averages about 14 inches.
20. Typically, November through April are considered wet weather, while May through October are considered dry weather months.
21. There are several domestic wells in the vicinity of the irrigation recycled use area and the evaporation/percolation ponds.
22. Water supply to the Big Bear area communities is from numerous groundwater production wells located in Big Bear Valley. TDS in the water supply averages about 280 mg/L based on data reported in the BBARWA's SMRs from 2017 through 2020.
23. BBARWA conducted a geotechnical study referenced as *Geotechnical Study, Irrigation Site, Lucerne Valley Area, San Bernardino County, California for Big Bear Area Regional Wastewater Agency, July 29, 1977*, as an initial investigation of the site for use for irrigation. The report shows that the site is underlain by soils consisting of fine to coarse, clean to silty sands containing various amounts of gravel from 5 to 24 feet below ground surface. Beneath this, to a depth of 60 to 100 feet below ground surface, the soil consists of fine to medium silty sands containing varying amounts of gravel and is locally cemented with calcium carbonate accumulated during deposition of the sediments. Bedrock underlies the older alluvium at a depth of 400 to 600 feet.

Basin Plan, Beneficial Uses, and Regulatory Considerations

24. The Water Quality Control Plan for the Colorado River Basin Region (Basin Plan), adopted on November 17, 1993 and most recently amended on January 8, 2019, designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Pursuant to Water Code section 13263, subdivision (a), WDRs must implement the Basin Plan and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241.
25. The Facility is located within the Lucerne Hydrologic Unit, and the Basin Plan designates the following beneficial uses for groundwater:
 - a. Municipal Supply (MUN),
 - b. Industrial Supply (IND), and
 - c. Agricultural Supply (AGR).

26. This Order establishes WDRs pursuant to division 7, chapter 4, article 4 of the Water Code for discharges that are not subject to regulation under Clean Water Act section 402 (33 U.S.C. § 1342).
27. These WDRs implement numeric and narrative water quality objectives for groundwater and surface waters established by the Basin Plan and other applicable state and federal laws and policies. The numeric objectives for groundwater designated for municipal and domestic supply include the maximum contaminant levels (MCLs) specified in California Code of Regulations, title 22, section 64421 et seq. Groundwater for use as domestic or municipal water supply (MUN) must not contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses as a result of human activity.
28. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet MCLs designed to protect human health and ensure that water is safe for domestic use.
29. The discharge authorized by this Order, except for discharges of residual sludge and solid waste, are exempt from the solid waste requirements of California Code of Regulations, title 27, section 20005 et seq. This exemption is based on section 20090, subdivisions (a) and (b) of title 27 of the California Code of Regulations, which provides that discharges of domestic sewage or wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leach fields are not subject to the requirements of title 27 if the following exemption conditions are met:
 - a. The applicable regional water board has issued WDRs, reclamation requirements, or waived such issuance;
 - b. The discharge is in compliance with the applicable water quality control plan; and
 - c. The wastewater does not need to be managed according to chapter 11, division 4.5, title 22 of the California Code of Regulations as a “hazardous waste.”
30. The discharge of waste authorized by these WDRs satisfies the conditions to be exempted from the requirements of title 27 of the California Code of Regulations, because (1) the discharge is regulated by these WDRs; (2) these WDRs will ensure the discharge complies with the Basin Plan; and (3) the discharge will not be of a “hazardous waste.”
31. Consistent with Water Code section 13241, the Regional Water Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

- a. Past, present, and probable future beneficial uses of water;
 - b. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
 - c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
 - d. Economic considerations;
 - e. The need for developing housing within the region(s); and
 - f. The need to develop and use recycled water.
32. Water Code section 13267 authorizes the Regional Water Board to require technical and monitoring reports. The monitoring and reporting requirements in Monitoring and Reporting Program (MRP) R7-2021-0023 are necessary to demonstrate compliance with this Order. The State Water Resources Control Board's (State Water Board's) electronic database, GeoTracker Information Systems, facilitates the submittal and review of monitoring and reporting documents. The burden, including costs, of the MRP bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.
33. Pursuant to Water Code section 13263, subdivision (g), the discharge of waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Antidegradation Analysis

34. State Water Board Resolution 68-16, entitled *Statement of Policy with Respect to Maintaining High Quality Waters in California* (Resolution 68-16), generally prohibits the Regional Water Board from authorizing discharges that will result in the degradation of high quality waters, unless it is demonstrated that any change in water quality will (a) be consistent with maximum benefit to the people of the state, (b) not unreasonably affect beneficial uses, and (c) not result in water quality less than that prescribed in state and regional policies (e.g., the violation of one or more water quality objectives). The discharger must also employ best practicable treatment or control (BPTC) to minimize the degradation of high quality waters. High quality waters are surface waters or areas of groundwater that have a baseline water quality better than required by water quality control plans and policies.
35. Some degradation of groundwater from the discharge to the irrigation recycled use area and the infiltration basins is consistent with Resolution 68-16, provided that the degradation:

- a. Is confined to a reasonable area;
 - b. Is minimized by means of full implementation, regular maintenance, and optimal operation of BPTC measures by the Discharger;
 - c. Is limited to waste constituents typically encountered in domestic wastewater;
 - d. Does not unreasonably affect any beneficial uses of groundwater prescribed in the Basin Plan, and will not result in the violation of any water quality objective; and
 - e. Is consistent with the maximum benefit to the people of the state.
36. Recycled water used for irrigation at the Lucerne Valley Facility is treated to secondary standards and has undergone substantial removal of soluble organic matter, solids, and nitrogen treatment. Constituents in the wastewater effluent that have the potential to degrade groundwater include nitrogen, chloride, sulfate, TDS, and total coliform. Each of these constituents is discussed below:
- a. **Nitrogen.** The Primary Maximum Contaminant Level (MCL) found in California Code of Regulations, title 22, section 64431 for nitrate plus nitrite as nitrogen is 10 mg/L. To account for the fate of transport for the various components of total nitrogen, as a conservative value, it is assumed that all nitrogen present converts to nitrate/nitrite. BBARWA's SMRs report an average of 3.9 mg/L for Total Inorganic Nitrogen and 4.9 mg/L for Total Nitrogen between January 2016 and December 2020. BBARWA conducted a study of the groundwater in the vicinity of the recycled water irrigation use site in September 2016 which included an analysis of potential sources of nitrate in the groundwater other than BBARWA recycled water. Some of the sources included onsite farming practices, irrigation and fertilization in excess of plant demands, and potential upgradient sources, such as discharges from individual onsite septic systems. The study found that nitrate concentrations have been increasing in the upgradient groundwater monitoring well but have been decreasing in the downgradient monitoring wells. To verify no degradation due to nitrogen is occurring, this Order requires quarterly total nitrogen and nitrate as nitrogen monitoring in the groundwater monitoring wells. This Order also provides an average monthly effluent limit for total nitrogen of 10 mg/L.
 - b. **Chloride and Sulfate.** The "recommended" Secondary MCLs in California Code of Regulations, title 22, section 64449 for chloride and sulfate are both 250 mg/L. Concentrations of chloride and sulfate are included in TDS measurements. BBARWA's SMRs report an average of 56 and 40 mg/L for chloride and sulfate, respectively, between January 2016 and December 2020. Additionally, BBARWA's SMRs, for the same time period, report a maximum of 87 and 48 mg/L for chloride and sulfate, respectively.

BBARWA occasionally experience increases in chloride due to the use of salt and brine on local roadways prior to snowstorm events. To evaluate the incremental degradation due to chloride and sulfate, this Order requires quarterly chloride and sulfate monitoring in the groundwater monitoring wells. This Order also provides an average monthly effluent limit of 60 mg/L and a daily maximum effluent limit of 80 mg/L for both chloride and sulfate.

- c. **TDS.** The Secondary MCL specified in California Code of Regulations, title 22, section 64449 for TDS ranges between the “recommended” consumer acceptance level of 500 mg/L and the “upper” consumer acceptance level of 1,000 mg/L, if it is neither reasonable nor feasible to provide more suitable waters. The typical incremental addition of dissolved salts from domestic water usage in wastewater treatment plants ranges from 150 to 380 mg/L. Domestic water supply to the Big Bear area communities showed an average concentration of about 280 mg/L based on data reported in the BBARWA’s SMRs from 2017 through 2020. From 2016 to December 2020, treated wastewater discharged had an average TDS concentration of approximately 440 mg/L. Thus, the average TDS increase over the domestic water supply in the discharge was about 160 mg/L. Based on the study that the Discharger conducted in September 2016, which analyzed the impacts of groundwater by the discharge, the results would help establish an appropriate effluent limitation for TDS. The study states that the average TDS concentration in the Lucerne Valley Groundwater Basin is closer to 500 mg/L in the vicinity of the discharge location, whereas the Basin as a whole has an average of approximately 1,100 mg/L. Downgradient TDS concentrations in groundwater were found to be equal to or above concentrations of water delivered to the discharge location and the basin-wide average TDS concentration is above that of the delivered water. Therefore, the delivered water is not expected to degrade the existing groundwater quality or limit existing downgradient beneficial uses. To verify there is no degradation due to TDS is occurring, this Order includes quarterly TDS monitoring in the groundwater monitoring wells. This Order also provides an effluent limit for TDS of 550 mg/L over a 12-month period.
- d. **Total Coliform.** Secondary treatment reduces fecal coliform densities by 90 to 99%; the remaining organisms in effluent are still 10^5 to 10^6 most probable number (MPN)/100 mL (U.S. Environmental Protection Agency, *Design Manual: Municipal Wastewater Disinfection*, EPA/625/1-86/021, October 1986.) Other sources of *E. Coli* may include residential septic systems and runoff from animal waste, which are both present in the areas surrounding the groundwater monitoring wells. Given the depth to groundwater, which is approximately 125 to 175 feet, it is not likely that pathogen-indicator bacteria will reach groundwater in excess of that prescribed in California Code of Regulations, title 22, section 64426.1, due to significant attenuation and removal in the soils in the vadose zone. To evaluate the potential degradation to groundwater due to pathogens, this

Order includes quarterly *E. coli* monitoring in the groundwater monitoring wells and monthly *E. coli* monitoring in the effluent.

37. The discharge of wastewater from the Facility, as permitted herein, reflects BPTC. The Facility incorporates:
- a. Technology for secondary treated domestic wastewater;
 - b. Structural controls to dispose of waste constituents in a designated area;
 - c. A network of groundwater monitoring wells;
 - d. An operation and maintenance manual;
 - e. An Irrigation Management Plan;
 - f. Staffing to ensure proper operation and maintenance; and
 - g. A standby emergency power generator of sufficient size to operate the treatment plant and ancillary equipment during periods of loss of commercial power.
38. Degradation of groundwater by some of the typical waste constituents associated with discharges from a facility treating domestic wastewater, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of regional utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. These factors, when taken in conjunction with the associated increase in waste constituents, are consistent with the maximum benefit to the people of the state. Accordingly, the discharge, as authorized, is consistent with the antidegradation provisions of Resolution 68-16 and applicable water quality objectives.

Stormwater

39. Federal regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on November 16, 1990 (40 C.F.R. parts 122, 123, and 124) to implement the Clean Water Act's stormwater program set forth in Clean Water Act section 402, subdivision (p) (33 U.S.C. § 1342(p)). In relevant part, the regulations require specific categories of facilities that discharge stormwater associated with industrial activity to "waters of the United States" to obtain National Pollutant Discharge Elimination System (NPDES) permits and to require control of such pollutant discharges using Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

40. The State Water Board adopted Order 2014-0057-DWQ (NPDES No. CAS000001), *General Permit for Storm Water Discharges Associated with Industrial Activities* (Industrial General Permit) on July 1, 2015. Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage with a design flow of one million gallons per day or more, or that are required to have an approved pretreatment program under 40 Code of Federal Regulations part 403, are required to enroll under the Industrial General Permit, unless there is no discharge of industrial stormwater to waters of the United States.

CEQA and Public Participation

41. Pursuant to California Code of Regulations, title 14, section 15301, the issuance of these WDRs, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq.
42. The Regional Water Board has notified the Discharger and all known interested agencies and persons of its intent to issue WDRs for this discharge, and has provided them with an opportunity for a public meeting and to submit comments.
43. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED that Order R7-2016-0026 is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code, and regulations adopted thereunder, the Discharger shall comply with the following:

A. Effluent Limitations

1. Effluent used for irrigation in the recycled use area or discharged into the overflow evaporation/percolation ponds for disposal shall not exceed the following effluent limits:

Table 3. Effluent Limitations

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum
20°C BOD ₅	mg/L	30	45	--
Total Suspended Solids	mg/L	30	45	--
Chloride	mg/L	60	--	80

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum
Sulfate	mg/L	60	--	80
Boron	mg/L	--	--	0.75
Total Nitrogen	mg/L	10	--	--

2. The 30-day average daily dry weather discharge for irrigation shall not exceed 4.8 MGD.
3. The hydrogen ion concentration (pH) in the effluent discharge for irrigation shall be maintained within the limits of 6.0 to 9.0 standard units.
4. The TDS concentration of the effluent shall not exceed a 12-month average effluent limit of 550 mg/L. The reported concentration shall be determined by the arithmetic mean of the last twelve months of monitoring.
5. The overflow evaporation/percolation ponds shall be maintained so that they continuously operate in aerobic conditions. The dissolved oxygen content in the upper zone (one foot) of the infiltration basins shall be equal to or greater than 1.0 mg/L.

B. Receiving Water Limitations

1. The discharge of wastewater from the Facility shall not cause groundwater to: exceed applicable water quality objectives; acquire taste, odor, toxicity, or color that create nuisance conditions; impair beneficial uses; or contain constituents in excess of California Maximum Contaminant Levels (MCLs), as set forth in title 22 of the California Code of Regulations (including, but not limited to, section 64426.1 for bacteriological constituents; section 64431 for inorganic chemicals; section 64444 for organic chemicals; and section 64678 for lead and copper).

C. Discharge Prohibitions

1. Discharge of waste classified as “hazardous,” as defined in California Code of Regulations, title 27, section 20164, or “designated,” as defined in Water Code section 13173 and California Code of Regulations, title 27, section 20164, is prohibited.
2. The discharge of treated wastewater at a location other than the designated disposal areas or as recycled water used for irrigation at approved use areas, is prohibited.

3. The discharge of wastewater and/or recycled water to surface waters or surface drainage courses is prohibited.
4. The Discharger shall not accept waste in excess of the design treatment capacity of the Facility's disposal system.
5. Surfacing or ponding of wastewater outside of the designated disposal locations is prohibited.
6. Application of treated wastewater for irrigation in excess of agronomic rates is prohibited.
7. Bypass or overflow of untreated or partially-treated waste is prohibited, except as permitted in Standard Provision E.13.
8. The discharge of wastewater to a location or in a manner different from that described in this Order is prohibited.
9. The discharge of wastewater to land not owned or controlled by the Discharger, or not authorized for such use, is prohibited.
10. The storage, treatment, or disposal of wastes from the Facility shall not cause contamination, pollution, or nuisance as defined in Water Code section 13050, subdivisions (k), (l), and (m).

D. Discharge Specifications

1. The Discharger shall maintain sufficient freeboard in the overflow evaporation/percolation ponds to accommodate seasonal precipitation and to contain a 100-year storm event, but in no case no less than two (2) feet of freeboard (measured vertically). Freeboard shall be utilized for wake and waves of fluid motion and emergency or natural disaster purposes only.
2. All treatment, storage, and disposal areas shall be designed, constructed, operated and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
3. Evaporation/percolation ponds shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
4. The evaporation/percolation ponds shall be managed to prevent breeding of mosquitoes. In particular:

- a. An erosion control program should ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
5. Public contact with wastewater shall be precluded through such means as fences, signs, or other acceptable alternatives.
6. Objectionable odors originating at the Facility shall not be perceivable beyond the property boundary.
7. The evaporation/percolation ponds shall be maintained and operated so as to maximize infiltration and minimize the increase of salinity in the groundwater.
8. Onsite wastes, including windblown spray from recycled water application, shall be strictly confined to the lands specifically designated for the disposal operation, and onsite irrigation practices shall be managed so there is no runoff of effluent from irrigated areas.
9. No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.
10. No spray irrigation of any recycled water shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground or schoolyard.
11. Except as allowed under California Code of Regulations, title 17, section 7604, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
12. Undisinfected secondary recycled water, as defined in California Code of Regulations, title 22, section 60301.900, may only be used for irrigation in the following applications:
 - a. Orchards where the recycled water does not come into contact with the edible portion of the crop;
 - b. Vineyards where the recycled water does not come into contact with the edible portion of the crop;

- c. Non-food bearing trees (Christmas tree farms are included in this category provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting or allowing access by the general public);
 - d. Fodder and fiber crops and pasture for animal not producing milk for human consumption;
 - e. Seed crops not eaten by humans;
 - f. Food crops that must undergo commercial pathogen-destroying processing before being consumed by humans; and
 - g. Ornamental nursery stock and sod farms provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting, retail sale, or allowing access by the general public.
13. No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with edible portions of food crops eaten raw by humans.
14. The delivery or use of recycled water shall conform with the reclamation criteria contained in California Code of Regulations, title 22 or amendments thereto, for the irrigation of food crops, irrigation of fodder, fiber, and seed crops, landscape irrigation, supply of recreational impoundments, and groundwater recharge.
15. Prior to delivering recycled water to any new user, the Discharger shall submit to the Regional Water Board a report discussing any new distribution system being constructed by the Discharger to provide service to the new user.
16. Recycled water shall not be delivered to any new user who has not first received a discharge permit from the Regional Water Board and approval from the State Water Board's Division of Drinking Water.
17. Treated or untreated sludge or similar solid waste materials shall be disposed of at locations approved by the Regional Water Board's Executive Officer.
18. Grazing of sheep on the irrigation site is allowed only under the following conditions, unless otherwise approved by the Regional Water Board's Executive Officer:
 - a. Grazing will only be conducted in October or November after the last cutting of hay has been baled;

- b. Grazing animals will not be allowed into a portion of the site until 10 days after it was last irrigated;
- c. Temporary fences will be erected to contain the grazing animals in an area of 40 acres or less;
- d. Only ewes that are about to lamb or ewes with newly born will be grazed;
- e. No animals will be sold for slaughter within 90 days after grazing; and
- f. No milk produced by sheep that have grazed at the irrigation site shall be used for human consumption.

E. Standard Provisions

1. **Noncompliance.** The Discharger shall comply with all of the terms, requirements, and conditions of this Order and MRP R7-2021-0023. Noncompliance is a violation of the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.) and grounds for: (1) an enforcement action; (2) termination, revocation and reissuance, or modification of these waste discharge requirements; or (3) denial of an Order renewal application.
2. **Enforcement.** The Regional Water Board reserves the right to take any enforcement action authorized by law. Accordingly, failure to timely comply with any provisions of this Order may subject the Discharger to enforcement action. Such actions include, but are not limited to, the assessment of administrative civil liability pursuant to Water Code sections 13323, 13268, and 13350, a Time Schedule Order (TSO) issued pursuant to Water Code section 13308, or referral to the California Attorney General for recovery of judicial civil liability.
3. **Proper Operation and Maintenance.** The Discharger shall at all times properly operate and maintain all systems and components of collection, treatment, and control installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance includes, but is not limited to, effective performance, adequate process controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities/systems when necessary to achieve compliance with this Order. All systems in service or reserved shall be inspected and maintained on a regular basis. Records of inspections and maintenance shall be retained and made available to the Regional Water Board on request.
4. **Reporting of Noncompliance.** The Discharger shall report any noncompliance that may endanger human health or the environment,

including spills in excess of one thousand (1,000) gallons occurring within the Facility or collection system. Information shall be provided orally to the Regional Water Board office and the Office of Emergency Services within twenty-four (24) hours of when the Discharger becomes aware of the incident. If noncompliance occurs outside of business hours, the Discharger shall leave a message on the Regional Water Board's office voicemail. A written report shall also be provided within five business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. A final certified report must be submitted through the online GeoTracker system, within 15 calendar days of the conclusion of spill response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time. All other forms of noncompliance shall be reported with the Discharger's next scheduled Self-Monitoring Report (SMR), or earlier if requested by the Regional Water Board's Executive Officer or if required by an applicable standard for sludge use and disposal.

5. **Duty to Mitigate.** The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.
6. **Material Changes.** Prior to any modifications which would result in any material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Regional Water Board, and if required by the Regional Water Board, obtain revised requirements before any modifications are implemented.
7. **Design Capacity Report.** The Discharger shall provide a report to the Regional Water Board when it determines that the Facility's average dry-weather flow rate for any month exceeds 80 percent of the design capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
8. **Operational Personnel.** The Facility shall be supervised and operated by persons possessing certification of appropriate grade pursuant to section 3680, chapter 26, division 3, title 23 of the California Code of Regulations.
9. **Familiarity with Order.** The Discharger shall ensure that all site-operating personnel are familiar with the content of this Order and maintain a copy of this Order at the site.

10. **Inspection and Entry.** The Discharger shall allow the Regional Water Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter the premises regulated by this Order, or the place where records are kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, records kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at this location.
11. **Records Retention.** The Discharger shall retain copies of all reports required by this Order and the associated MRP. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. Records may be maintained electronically. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Water Board's Executive Officer.
12. **Change in Ownership.** This Order is not transferable to any person without written approval by the Regional Water Board's Executive Officer. Prior to any change in ownership of this operation, the Discharger shall notify the Regional Water Board's Executive Officer in writing at least 30 days in advance. The notice must include a written transfer agreement between the existing owner and the new owner. At a minimum, the transfer agreement must contain a specific date for transfer of responsibility for compliance with this Order and an acknowledgment that the new owner or operator is liable for compliance with this Order from the date of transfer. The Regional Water Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate other requirements as may be necessary under the Water Code.
13. **Bypass.** Bypass (i.e., the intentional diversion of waste streams from any portion of the treatment facilities, except diversions designed to meet variable effluent limits) is prohibited. The Regional Water Board may take enforcement action against the Discharger for bypass unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment

facilities that causes them to be inoperable, or substantial and permanent loss of natural resources reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in fee collection; and

- b. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment was not installed to prevent bypass occurring during equipment downtime, or preventative maintenance; or
- c. Bypass is (1) required for essential maintenance to ensure efficient operation; (2) neither effluent nor receiving water limitations are exceeded and (3) the Discharger notifies the Regional Water Board ten (10) days in advance.

In the event of an unanticipated bypass, the Discharger shall immediately report the incident to the Regional Water Board. During non-business hours, the Discharger shall leave a message on the Regional Water Board's office voicemail. A written report shall be provided within five (5) business days after the Discharger is aware of the incident. The written report shall include a description of the bypass, any noncompliance, the cause, period of noncompliance, anticipated time to achieve full compliance, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

14. **Backup Generators.** Standby, power generating facilities shall be available to operate the Facility during a commercial power failure.
15. **Format of Technical Reports.** The Discharger shall furnish, under penalty of perjury, technical monitoring program reports, and such reports shall be submitted in accordance with California Code of Regulations, title 23, division 3, chapter 30, as raw data uploads electronically over the Internet into the State Water Board's [GeoTracker database](#). Documents that are normally mailed by the Discharger to the Regional Water Board, such as regulatory documents, narrative monitoring reports or materials, and correspondence, shall also be uploaded into GeoTracker in the appropriate Microsoft Office software application format, such as Word or Excel files, or as a Portable Document Format (PDF) file. Large documents must be split into appropriately-labelled, manageable file sizes and uploaded into GeoTracker.
16. **Qualified Professionals.** In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of California registered professionals (i.e., civil engineer, engineering geologist, geologist, etc.) competent and proficient in the fields pertinent to

the required activities. All technical reports required under this Order that contain work plans, describe the conduct of investigations and studies, or contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately-qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal. Additionally, all field activities are to be conducted under the direct supervision of one or more of these professionals.

17. **Certification Under Penalty of Perjury.** All technical reports required in conjunction with this Order shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying under penalty of perjury under the laws of the State of California, that the reports were prepared under his or her supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted, and that based on his or her inquiry of the person or persons who manage the system, the information submitted is, to the best of his or her knowledge and belief, true, complete, and accurate.
18. **Violation of Law.** This Order does not authorize violation of any federal, state, or local laws or regulations.
19. **Property Rights.** This Order does not convey property rights of any sort, or exclusive privileges, nor does it authorize injury to private property or invasion of personal rights.
20. **Modification, Revocation, Termination.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for an Order modification, rescission, or reissuance, or the Discharger's notification of planned changes or anticipated noncompliance, does not stay any Order condition. Causes for modification include, but are not limited to, the violation of any term or condition contained in this Order, a material change in the character, location, or volume of discharge, a change in land application plans or sludge use/disposal practices, or the adoption of new regulations by the State Water Board, Regional Water Board (including revisions to the Basin Plan), or federal government.
21. **Severability.** The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of these requirements shall not be affected.

Any person aggrieved by this Regional Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water

Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the statutes and regulations applicable to filing petitions are available on the State Water Board's website and can be provided upon request.

Order Attachments

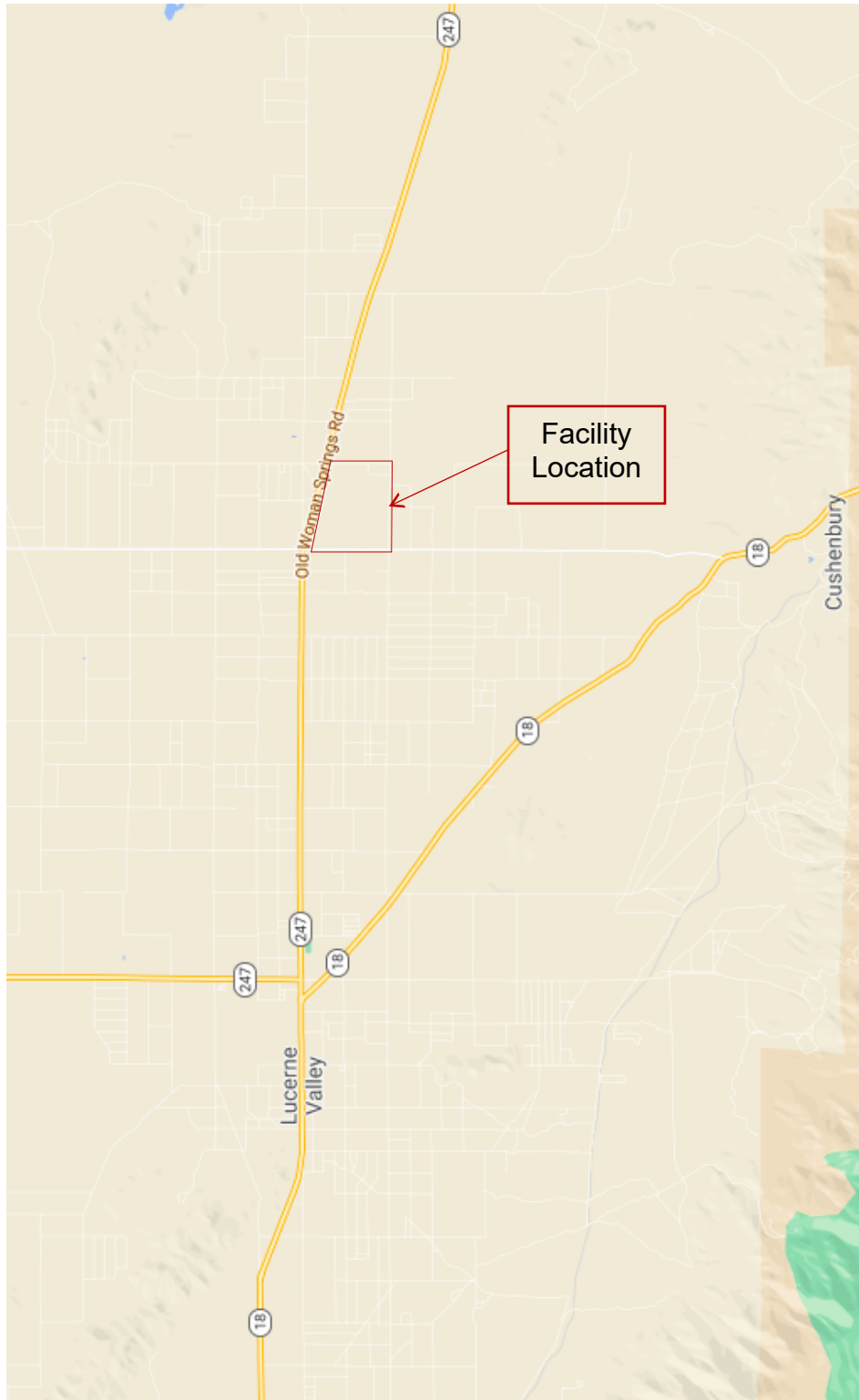
Attachment A—Vicinity Map

Attachment B—Process Flow Diagram

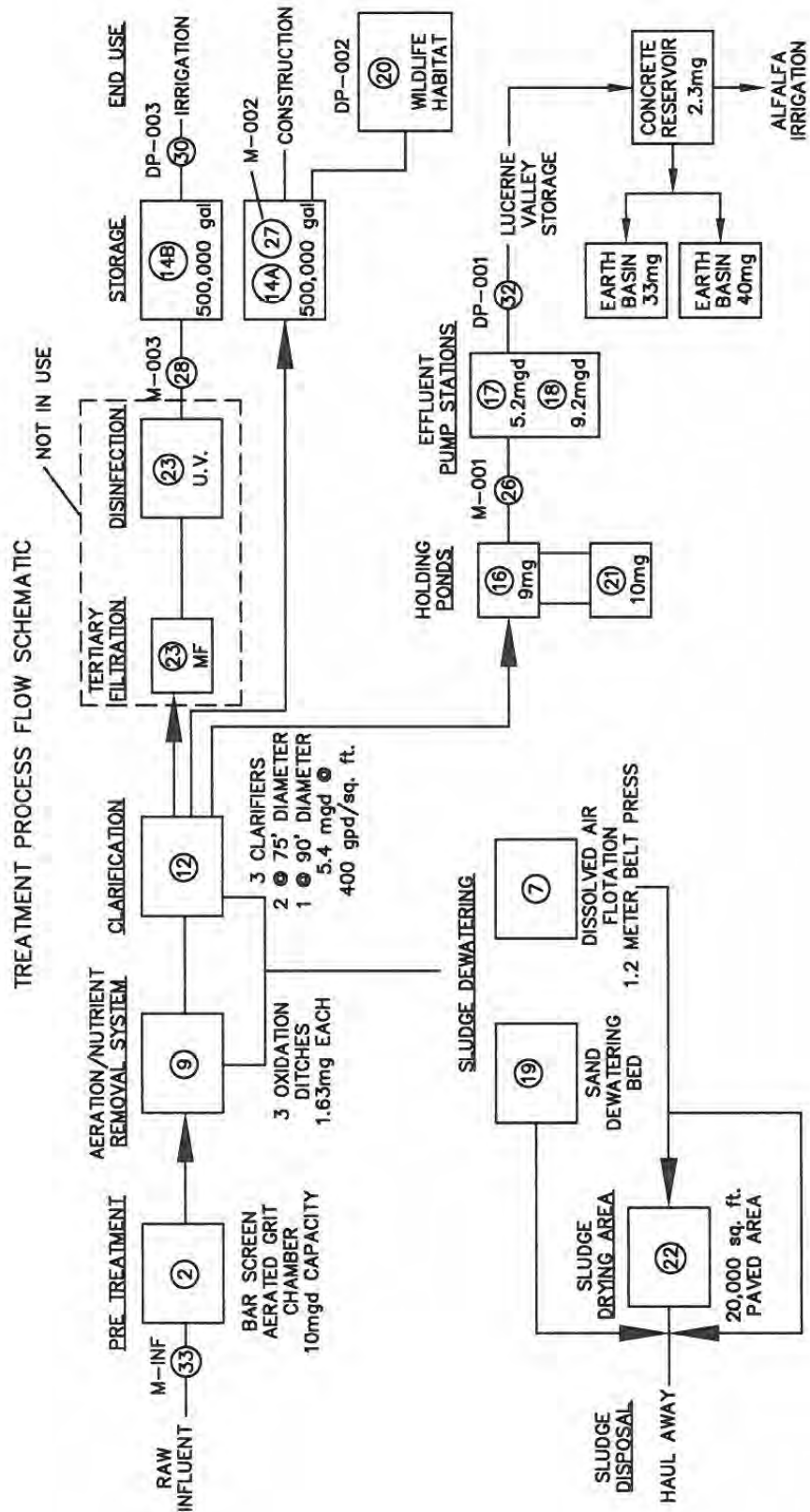
Attachment C—Lucerne Valley Facility Layout

Monitoring and Reporting Program R7-2021-0023

ATTACHMENT A—VICINITY MAP



ATTACHMENT B—PROCESS FLOW DIAGRAM



ATTACHMENT C—LUCERNE VALLEY FACILITY LAYOUT



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN

MONITORING AND REPORTING PROGRAM R7-2021-0023
FOR
BIG BEAR AREA REGIONAL WASTEWATER AGENCY, OWNER/OPERATOR
EXPORT OF RECYCLED WATER TO LUCERNE VALLEY
LUCERNE VALLEY-SAN BERNARDINO COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code section 13267 and describes requirements for monitoring the relevant wastewater system and groundwater quality. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Regional Water Board or its Executive Officer.

The Discharger owns and operates the wastewater treatment system that is subject to Order R7-2021-0023. The reports required herein are necessary to ensure that the Discharger complies with the Order. Pursuant to Water Code section 13267, the Discharger shall implement the MRP and shall submit monitoring reports described herein.

A. Sampling and Analysis General Requirements

1. **Testing and Analytical Methods.** The collection, preservation, and holding times of all samples shall be in accordance with U.S. Environmental Protection Agency (USEPA)-approved procedures. All analyses shall be conducted in accordance with the latest edition of either the USEPA's *Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act* (40 C.F.R. part 136) or *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium* (SW-846), unless otherwise specified in the MRP or approved by the Regional Water Board's Executive Officer.
2. **Laboratory Certification.** All analyses shall be conducted by a laboratory certified by the State Water Board, Division of Drinking Water's Environmental Laboratory Accreditation Program (ELAP), unless otherwise approved by the Regional Water Board's Executive Officer.
3. **Reporting Levels.** All analytical data shall be reported with method detection limits (MDLs) and with either the reporting level or limits of quantitation (LOQs) according to 40 Code of Federal Regulations part 136, Appendix B. The laboratory reporting limit for all reported monitoring data shall be no greater than the practical quantitation limit (PQL).

4. **Sampling Location(s).** Samples shall be collected at the location(s) specified in the WDRs. If no location is specified, sampling shall be conducted at the most representative sampling point available.
5. **Representative Sampling.** All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the chain of custody form for the sample. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Regional Water Board staff.
6. **Instrumentation and Calibration.** All monitoring instruments and devices used by the Discharger shall be properly maintained and calibrated to ensure their continued accuracy. Any flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices. In the event that continuous monitoring equipment is out of service for a period greater than 24 hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.
7. **Field Test Instruments.** Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that:
 - a. The user is trained in proper use and maintenance of the instruments;
 - b. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
 - c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
 - d. Field calibration reports are submitted.
8. **Records Retention.** The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, for a minimum of five (5) years from the date of the sampling or measurement. This period may be extended by request of the Regional Water Board's Executive Officer at any time. Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurement(s);
- b. The individual(s) who performed the sampling or measurement(s);
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or method used; and
- f. All sampling and analytical results, including:
 - i. units of measurement used;
 - ii. minimum reporting limit for the analyses;
 - iii. results less than the reporting limit but above the method detection limit (MDL);
 - iv. data qualifiers and a description of the qualifiers;
 - v. quality control test results (and a written copy of the laboratory quality assurance plan);
 - vi. dilution factors, if used; and
 - vii. sample matrix type.

9. **Inoperative Facility.** If the Facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Regional Water Board indicating that there has been no activity during the required reporting period.

B. Effluent Monitoring

1. Representative samples of the undisinfected secondary recycled water shall be taken at the WWTP. The samples shall be analyzed for the following constituents and according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Irrigation Flow	MGD	Flow Meter Reading	Daily	Monthly

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
20°C BOD ₅ ⁸	mg/L	24 Hr. Composite	2x/Month	Monthly
Total Suspended Solids (TSS)	mg/L	24 Hr. Composite	2x/Month	Monthly
pH	s.u. ⁹	Grab	Daily	Monthly
Dissolved Oxygen ¹⁰	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids (TDS)	mg/L	24 Hr. Composite	Monthly	Monthly
Sulfate	mg/L	24 Hr. Composite	Monthly	Monthly
Chloride	mg/L	24 Hr. Composite	2x/Month	Monthly
Fluoride	mg/L	24 Hr. Composite	Monthly	Monthly
Nitrate as N	mg/L	24 Hr. Composite	Monthly	Monthly
Total Nitrogen	mg/L	24 Hr. Composite	Monthly	Monthly
<i>E. Coli</i>	MPN/100mL ¹¹	Grab	Monthly	Monthly
Volatile Organic Compounds (VOCs)	µg/L ¹²	24 Hr. Composite	Annually	Annually

⁸ 5-Day Biochemical Oxygen Demand at 20 degrees Celsius.

⁹ Standard pH units

¹⁰ Dissolved Oxygen shall be monitored at the upper one-foot layer of the storage or percolation ponds.

¹¹ Most Probable Number per 100 milliliters.

¹² Micrograms per liter

C. Overflow Pond Monitoring

1. During months when the overflow evaporation/percolation ponds are not used, the Discharger shall report that there has been no activity. During months when the overflow evaporation/percolation ponds are in use, the ponds shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Flow	MGD	Flow Measurement	Daily	Monthly
Dissolved Oxygen	mg/L	Grab	2x/Month	Monthly
pH	s.u.	Grab	2x/Month	Monthly
Total Dissolved Solids	mg/L	Grab	2x/Month	Monthly
Freeboard	ft	Measurement	2x/Month	Monthly

D. Domestic Water Supply Monitoring

1. The domestic water supply shall be a flow weighted composite sample monitored at the water supply production wells in Big Bear Valley and include notations of which wells are non-operating for a reporting period and monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
General Minerals ¹³	mg/L	Grab	Annually	Annually

¹³ General Minerals shall include: total dissolved solids, calcium, chloride, fluoride, iron, magnesium, manganese, nitrate, potassium, sodium, sulfate, barium, total alkalinity (including alkalinity series), and hardness.

E. Groundwater Monitoring

- The groundwater monitoring wells shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Depth to Groundwater	ft (msl) ¹⁴	Measurement	Quarterly	Quarterly
Groundwater Gradient ¹⁵	NA	Direction	Quarterly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as N	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Fluoride	mg/L	Grab	Quarterly	Quarterly
Sulfate	mg/L	Grab	Quarterly	Quarterly
<i>E. Coli</i>	MPN/100mL	Grab	Quarterly ¹⁶	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Boron	mg/L	Grab	Quarterly	Quarterly
VOCs	µg/L	Grab	Annually	Annually

F. Reporting Requirements

- Daily, weekly, and monthly monitoring shall be included in the Monthly Self-Monitoring Reports (SMRs). Monthly SMRs shall be submitted by the **15th day of the following month**. Quarterly SMRs shall be submitted by

¹⁴ Above mean sea level.

¹⁵ Groundwater flow direction.

¹⁶ After two years of groundwater monitoring that show consistent negligible impacts to groundwater, the Discharger may request to have the monitoring schedule revised with Executive Officer approval.

January 15th, April 15th, July 15th, and October 15th. Annual SMRs shall be submitted by **January 31st** of the following year.

2. SMRs shall include, at a minimum, the following:
 - a. **Cover Letter.** A transmittal letter summarizing the essential points in the report.
 - b. **Maps.** Maps depicting the Facility layout and the location of sampling points.
 - c. **Summary of Monitoring Data.** Tables of the data collected. The tables shall include all of the data collected to-date at each monitoring point, organized in chronological order, with the oldest data in the top row and progressively newer data in rows below the top row. Each row shall be a monitoring event and each column shall be a separate parameter at a single location (or a single average, as appropriate).
 - d. **Graphical Display.** Graphs depicting monitoring parameters through time, with the concentrations being the y-axis and time being the x-axis. Logarithmic scales can be used for values that vary by orders of magnitude. Individual graphs can combine multiple locations or multiple chemicals if that allows the data to be compared more easily.
 - e. **Compliance Summary.** Identification of any violations found since the last report was submitted, and actions taken or planned for correcting each violation. If the Discharger previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. If no violations have occurred since the last submittal, this shall be stated.
3. SMRs shall be certified under penalty of perjury to be true and correct. Each SMR submitted to the Regional Water Board shall contain the following completed declaration:

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

Executed on the _____ day of _____ at _____

_____ (Signature)

_____ (Title)"

4. The SMRs and any other information requested by the Regional Water Board shall be signed by a principal executive officer or ranking elected official. A duly authorized representative of the Discharger may sign the documents if:
 - a. The authorization is made in writing by the person described above;
 - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
 - c. The written authorization is submitted to the Regional Water Board's Executive Officer.
5. The results of any analysis taken more frequently than required at the locations specified in this MRP shall be reported to the Regional Water Board.
6. As specified in Standard Provision F.15, technical reports shall be prepared by or under the direction of appropriately qualified professional(s). Each technical report submitted shall contain a statement of qualification of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.
7. As specified in Standard Provision F.14, the Discharger shall comply with Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under MRP R7-2021-0023 and any future revision(s) hereto, including groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and PDF monitoring reports to the State Water Board's Geotracker database. Documents too large to be uploaded into Geotracker should be broken down into smaller electronic files and labelled properly prior to uploading into Geotracker.