CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM
ORDER R5-2024-0804
FOR
EL DORADO IRRIGATION DISTRICT
EL DORADO HILLS WASTEWATER TREATMENT PLANT
EL DORADO COUNTY

This Monitoring and Reporting Program (MRP Order), which is separately issued pursuant to Water Code section 13267, subdivision (b)(1), establishes monitoring and reporting requirements related to the waste discharges regulated under the General Order for Municipal Wastewater Dischargers That Meet Objectives/Criteria at the Point of Discharge to Surface Water, Order R5-2023-0025, NPDES Permit CAG585001 (Municipal General Order) and Notice of Applicability (NOA) R5-2023-0025-003 dated 23 September 2024.

The El Dorado Irrigation District (Discharger) owns and operates the El Dorado Hills Wastewater Treatment Plant (Facility) that is subject to the Municipal General Order and NOA R5-2023-0025-003. The Findings set forth in the Municipal General Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP Order and supplement the additional findings herein. Please note the Municipal General Order and NOA R5-2023-0025-003 establish monitoring and reporting requirements, which are applicable to this MRP Order.

The monitoring and reporting required in this MRP Order are necessary to determine compliance with the groundwater limitations in the Municipal General Order and in NOA R5-2023-0025-003. The land discharge monitoring and groundwater monitoring contained in this MRP Order are necessary to adequately characterize the groundwater quality underlying the Facility in order to assess the potential impacts the Facility may have on groundwater. Additionally, this MRP Order includes groundwater reporting requirements to collect data and enable the characterization of groundwater quality. A Groundwater Information Report is necessary to characterize and determine the potential impact the Facility may have on groundwater. Annual Groundwater Assessment Reports are necessary to determine if the Facility is impacting groundwater and contributing to groundwater degradation. The Groundwater Monitoring Well Installation Work Plan and a Groundwater Monitoring Well Installation Reports have been included in this MRP Order to collect the necessary information if the Discharger deems it necessary to add or replace any groundwater monitoring wells. The burden, including costs, associated with these reports is reasonable relative to the need and benefits to be obtained therefrom.

This MRP Order may be separately revised by the Executive Officer, in accordance with delegated authority under Water Code section 13223. The Discharger shall not implement any changes to this MRP Order unless and until the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopts, or the Executive Officer issues, a revised MRP Order. This MRP Order will remain effective until the Discharger is no longer covered by NOA R5-2023-0025-003.

I. MONITORING

The monitoring results of this MRP Order shall be submitted in accordance with Appendix D of NOA R5-2023-0025-003, including submitting electronic self-monitoring reports (SMR)

via the California Integrated Water Quality System Program website for data collected from monitoring locations designated in this MRP Order.

A. MONITORING LOCATIONS

1. The Discharger shall establish the monitoring locations listed in Table 1 to adequately characterize the water quality of the storage reservoir and the groundwater quality underlying the Facility.

Table 1. Monitoring Station Locations

Monitoring Location Name	Monitoring Location Description
RES-001	A location where a representative sample can be collected of water in the storage reservoir. Latitude: 38º 38’ 14” N - Longitude: 121º 03’ 32” W
MW-001	Upgradient groundwater monitoring well east of the storage reservoir. Latitude: 38° 38' 14 " N - Longitude: 121° 03' 18 " W
MW-002	Downgradient groundwater monitoring well northwest of the storage reservoir. Latitude: 38° 38' 17 " N - Longitude: 121° 03' 33 " W
MW-003	Downgradient groundwater monitoring well southwest of the storage reservoir. Latitude: 38° 38' 9 " N - Longitude: 121° 03' 32 " W

Table 1 Note:

1. The North latitude and West longitude information in Table 1 are approximate for administrative purposes.

B. LAND DISCHARGE MONITORING REQUIREMENTS

1. Monitoring Location RES-001

a. The Discharger shall monitor the storage reservoir at Monitoring Location RES-001, as specified in Table 2 and the testing requirements in section B.1.b. Monitoring Location RES-001 is defined in Table 1. If there is no water in the storage reservoir during the designated monitoring period, monitoring is not required during that period. If there is no water in the storage reservoir, the Discharger shall so state in the monthly SMR.

Table 2. Storage Reservoir Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Biochemical Oxygen Demand (5-day @ 20°C)	Milligrams per Liter (mg/L)	Grab	Once per Month (1/Month)
Electrical Conductivity @ 25°C	Micromhos per Centimeter (µmhos/cm)	Grab	1/Month

Parameter	Units	Sample Type	Minimum Sampling Frequency
Nitrate (as Nitrogen)	mg/L	Grab	1/Month
Total Dissolved Solids	mg/L	Grab	Once per Quarter (1/Quarter)
Standard Minerals	mg/L	Grab	1/Quarter

b. **Table 2 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table 2:

i. **Applicable to all parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 C.F.R. part 136 allowed sample type.

ii. **Grab Sample.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.

iii. **Field Meter.** A hand-held field meter may be used for **electrical conductivity**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP Order shall be maintained at the Facility.

iv. **Standard Minerals** shall include the following applicable parameters, in totals: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphate, total alkalinity (including alkalinity series), sulfate, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance). Samples for iron and manganese may be passed through a 1.5-micron filter for comparison to the respective Secondary MCLs.

v. **Minimum Sampling Frequency.** Standard minerals shall be sampled quarterly for the first three years after the effective date of this MRP Order. The sampling frequency can be reduced to once per year after the initial three-year period for **standard minerals**.

C. GROUNDWATER MONITORING REQUIREMENTS

1. Monitoring Locations MW-001, MW-002, and MW-003 and Additional or Replacement Wells, If Installed

a. The Discharger shall monitor groundwater at Groundwater Monitoring Locations MW-001, MW-002, and MW-003, and any additional wells installed to monitor groundwater, as specified in Table 3 and the testing requirements in section C.1.d.

b. Prior to construction and/or beginning a sampling program of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board (see also section II. Reporting Requirements and Attachment A). Once installed, all new wells shall be added to the monitoring network (which currently consists of well numbers MW-001, MW-002, and MW-003) and shall be sampled and analyzed according to the schedule below.

c. Prior to sampling, the groundwater elevations shall be measured, and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized.

Table 3. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	±0.01 feet	Measurement	1/Quarter
Groundwater Elevation	±0.01 feet	Calculated	1/Quarter
Gradient	feet/feet	Calculated	1/Quarter
Gradient Direction	Degrees	Calculated	1/Quarter
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Quarter
pH	standard units	Grab	1/Quarter
Nitrate (as Nitrogen)	mg/L	Grab	1/Quarter
Total Coliform Organisms	Most Probable Number per 100 milliliters (MPN/100 mL)	Grab	1/Quarter
Total Dissolved Solids	mg/L	Grab	1/Quarter
Total Organic Carbon	mg/L	Grab	1/Quarter
Arsenic, Dissolved	µg/L	Grab	1/Quarter
Standard Minerals	mg/L	Grab	1/Quarter

d. **Table 3 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table 3:

i. **Groundwater Elevation** shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well. The groundwater elevation shall be used to calculate the direction and gradient of groundwater flow, which must be reported.

ii. **Applicable to all parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

iii. **Grab Sample.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.

iv. **Handheld Field Meter.** A handheld field meter may be used for **electrical conductivity and pH** provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

v. **Standard Minerals** shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphate, total alkalinity (including alkalinity series), sulfate, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance). Samples for iron and manganese may be passed through a 1.5-micron filter for comparison to the respective Secondary MCLs.

vi. **Minimum Sampling Frequency.** For each constituent the Discharger can demonstrate after three years of quarterly monitoring that the data ranges, averages, and standard deviations are similar for quarterly versus twice a year, the minimum sample frequency can be reduced to twice a year. This reduced frequency does not apply to any wells constructed after the effective date of this MRP Order.

II. REPORTING REQUIREMENTS

A. GROUNDWATER INFORMATION REPORT

1. The Discharger shall submit the Groundwater Information Report by **1 May 2025** and shall include the following information or provide updates to the following information, to the extent feasible from available information:

   a. Storage reservoir area;

   b. Storage reservoir working liquid depth;

   c. Storage reservoir invert and berm elevation;

   d. Vertical separation distance between storage reservoir invert and highest anticipated groundwater;

e. Existing monitoring wells, including at minimum, construction date, reference elevation, depth, screened interval, and boring logs.

f. Subsurface cross-section(s) using boring logs from wells and other available information to demonstrate the presence of hardpan layer(s).

g. Water balance calculations for the storage reservoir to estimate annual seepage losses

h. Brief characterization of the storage reservoir's setting, including surface water runoff, nearest surface water bodies, climate (annual precipitation for average and flood years and reference evaporation), onsite soils and description of stratigraphy (if possible, infiltration rates), regional groundwater gradient, groundwater depth under the Facility, and characterization of groundwater wells in the vicinity of the Facility.

i. Assessor parcel number(s) covering the storage reservoir, including the numbers, owner, and acreage.

j. A scaled facility map that shows the Discharger's property line, prevalent groundwater flow direction, Carson Creek and any nearby tributaries, and all monitoring locations specified in this Order.

B. ANNUAL GROUNDWATER ASSESSMENT REPORT

1. The Discharger shall submit an Annual Groundwater Assessment Report to determine if the Facility is impacting groundwater and contributing to groundwater degradation. The analysis shall assess whether the groundwater is in compliance with groundwater limitations and the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition, February 2019 (Basin Plan), which requires that constituent concentrations in the groundwater do not exceed either the Basin Plan's groundwater water quality objectives or background groundwater concentrations, whichever is greater. The report should also include groundwater gradients and flow direction and a summary of data collected during the term of the annual report. The data summary shall also include a comparison to previous groundwater data collected from monitoring wells, where available, and a comparison of current groundwater monitoring data to data collected from the storage reservoir at monitoring location RES-001. The Discharger shall provide the Annual Groundwater Assessment Report to the Central Valley Water Board beginning on **1 May 2025 and annually on 1 May thereafter**. The annual report shall cover the previous calendar year.

C. GROUNDWATER MONITORING WELL INSTALLATION WORK PLAN AND REPORT (IF NECESSARY)

1. If the Discharger determines there is a need to install new or replace existing groundwater monitoring wells, then the Discharger shall follow the requirements of Attachment A – Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports. The Discharger shall provide a Groundwater Monitoring Well Installation Work Plan and a Groundwater Monitoring

Well Installation Report to the Central Valley Water Board **prior to installing any new monitoring wells**.

If the Discharger does install new groundwater monitoring wells, the Discharger shall follow the groundwater monitoring requirements in section I.C of this MRP Order for the new groundwater monitoring wells, as well as the existing groundwater monitoring wells.

A transmittal/cover letter shall be included with each submittal of monitoring and reporting requirements contained in this MRP Order and shall contain the following penalty of perjury statement and shall be signed by the Discharger or the Discharger's authorized agent:

> *"I certify under penalty of law that I have personally examined and am familiarwith the information submitted in this document and all attachments 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."*

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $1,000 per day pursuant to Water Code section 13268. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this MRP Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Resources Control Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided on request.

The Discharger shall implement the above monitoring program starting **1 October 2024**.

This Order is issued under authority delegated to the Executive Officer by the Central Valley Water Board pursuant to Resolution R5-2018-0057, and Water Code section 13223.

Date: 2024.09.24 12:01:01 -07'00'

PATRICK PULUPA, Executive Officer

ATTACHMENT A – STANDARD REQUIREMENTS FOR MONITORING WELL INSTALLATION WORK PLANS AND MONITORING WELL INSTALLATION REPORTS

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

I. MONITORING WELL INSTALLATION WORK PLAN

The monitoring well installation work plan shall contain, at a minimum, the following information:

A. General Information

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

B. Drilling Details

1. On-site supervision of drilling and well installation activities.
2. Description of drilling equipment and techniques.
3. Equipment decontamination procedures.
4. Cutting disposal methods.
5. Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods.

C. Monitoring Well Design (in graphic form with rationale provided in narrative form)

1. Borehole diameter.
2. Casing and screen material, diameter, and centralizer spacing (if needed).
3. Type of well caps (bottom cap either screw on or secured with stainless steel screws).
4. Anticipated depth of well, length of well casing, and length and position of perforated interval.
5. Thickness, position and composition of surface seal, sanitary seal, and sand pack.
6. Anticipated screen slot size and filter pack.

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement)

1. Method of development to be used (i.e., surge, bail, pump, etc.).
2. Parameters to be monitored using development and record keeping technique.
3. Method of determining when development is complete.
4. Disposal method of development water.

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot)

1. Identify the Licensed Land Surveyor or Licensed Civil Engineer that will perform the survey.
2. Datum for survey measurements.
3. List well features to be surveyed (i.e., top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedure for:

1. Equipment to be used during sampling.
2. Equipment decontamination procedures.
3. Water level measurement procedures.
4. Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged).
5. Monitoring and record keeping during water level measurement and well purging (including copies of record keeping logs to be used).
6. Purge water disposal.
7. Analytical methods and required reporting limits.
8. Sample containers and preservatives.
9. Sampling:
    a. General sampling techniques
    b. Record keeping during sampling (include copies of record keeping logs to be used)
    c. QA/QC samples
10. Chain of Custody.
11. Sample handling and transport.

II. MONITORING WELL INSTALLATION REPORT

The monitoring well installation report shall contain the information listed below. In addition, the report shall also clearly identify, describe, and justify any deviations from the approved work plan.

A. General Information

1. Purpose of the well installation project.
2. Number of monitoring wells installed and identifying label(s) for each.
3. Brief description of geologic and hydrogeologic conditions encountered during well installation.
4. Topographic map showing facility location, roads, surface water bodies.
5. Large-scale site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form)

1. On-site supervision of drilling and well installation activities.
2. Drilling contractor and driller's name.
3. Description of drilling equipment and techniques.
4. Equipment decontamination procedures.
5. Well boring log (provide for each well):
   a. Well boring number and date drilled.
   b. Borehole diameter and total depth.
   c. Total depth of open hole (i.e., total depth drilled if no caving or back-grouting occurs).
   d. Depth to first encountered groundwater and stabilized groundwater depth.
   e. Detailed description of soils encountered, using the Unified Soil Classification System.

C. Well Construction Diagram (required for each well)

1. Monitoring well number and date constructed.
2. Casing and screen material, diameter, and centralizer spacing (if needed).
3. Length of well casing.
4. Length and position of slotted casing and size of perforations.
5. Thickness, position and composition of surface seal, sanitary seal, and sand pack.
6. Type of well caps (bottom cap either screw on or secured with stainless steel screws).

D. Well Development (required for each well)

1. Date(s) and method of development.
2. How well development completion was determined.

3. Volume of water purged from well and method of development water disposal.

E. Well Survey (required for each well)

1. Present the well survey report data in a table.
2. Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot).
3. Ground surface elevation (feet above mean sea level to within 0.01 foot).
4. Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale).

F. Water Sampling

1. Present water sampling data in a table.
2. Date(s) of sampling.
3. Sample identification.
4. How well was purged.
5. How many well volumes purged.
6. Levels of temperature, EC, and pH at stabilization.
7. Sample collection, handling, and preservation methods.
8. Analytical methods used.
9. Laboratory analytical data sheets.
10. Water level elevation(s).
11. Groundwater contour map.

G. Soil sampling (if applicable)

1. Present soil sampling data in a table.
2. Date(s) of sampling.
3. Sample collection, handling, and preservation methods.
4. Sample identification.
5. Analytical methods used.
6. Laboratory analytical data sheets.

H. Well Completion Report(s)

As defined in California Water Code section 13751. Blank forms are available from the California Department of Water Resources' website. Section shall be submitted under separate cover.

I. Appendix

Shall include at a minimum, copies of the following:

1. County-issued well construction permits.
2. Registered engineer or license surveyor's report and field notes.
3. Field notes from well development.