

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM WQ 2016-0068-DDW-R5005
FOR
CITY OF DAVIS
RECYCLED WATER PROGRAM
YOLO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the recycled water program for the City of Davis. This MRP is issued pursuant to Water Code section 13267. The Recycled Water System Administrator, the City of Davis (Discharger) shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer of the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

The Discharger has applied for and received coverage for the recycled water program under State Water Resources Control Board (State Water Board) Water Quality Order 2016-0068-DDW, *Water Reclamation Requirements for Recycled Water Use* (General Order) and issued a Notice of Applicability (NOA) of WQ 2016-0068-DDW-R5005. The monitoring and reporting described herein is necessary to ensure that the Discharger complies with the NOA and General Order. Pursuant to California Water Code section 13267, the Administrator shall implement this MRP and shall submit the monitoring reports described herein.

Water Code section 13267 states, in part:

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

Water Code section 13268 states, in part:

“(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of section 13399.2, or

falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with article 2.5 (commencing with section 13323) of chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The name of the sampler, sample type (grab or composite), time, date, location, bottle type, and any preservative used for each sample shall be recorded on the sample chain of custody form. The chain of custody form must also contain all custody information including date, time, and to whom samples were relinquished. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Central Valley Water Board staff.

Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that they are used by a State Water Board, Environmental Laboratory Program (ELAP) certified laboratory or:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced by the manufacturer or authorized representative at the recommended frequency; and
4. Field calibration reports are maintained and available for at least three years.

Analytical procedures shall comply with the methods and holding times specified in the following: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater (EPA); Test Methods for Evaluating Solid Waste (EPA); Methods for Chemical Analysis of Water and Wastes (EPA); Methods for Determination of Inorganic Substances in Environmental Samples (EPA), and Standard Methods for the Examination of Water and Wastewater (APHA/AWWA/WEF). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency (EPA) or the State Water Board Division of Drinking Water's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

Monitoring requirements listed below may duplicate existing requirements under other orders including waste discharge requirements (WDRs) or waivers of WDRs. Duplication of sampling and monitoring activities are not required if the monitoring activity satisfies the requirements of the General Order. Collecting composite samples is acceptable in most cases. The facility may continue using existing sampling collection equipment that is consistent with the applicable facility order. However, due to short

sample holding times, bacteriological samples collected to verify disinfection effectiveness must be grab samples. In addition to submitting the results under another order, the results shall be submitted in the reports required by this General Order.

A glossary of terms in this MRP is included on the last page.

MONITORING REQUIREMENTS

A. RECYCLED WATER MONITORING

If recycled water is used for irrigation of landscape areas, priority pollutant monitoring is required at the production facility. Landscape areas are defined as parks; greenbelts; playgrounds; school yards; athletic fields; golf courses; cemeteries; residential landscaping; common areas; commercial landscaping (except eating areas); industrial landscaping (except eating areas); freeway, highway, and street landscaping:

Table 1. Recycled Water Monitoring for Priority Pollutants

Constituent	Treatment System Flow Rate	Sample Frequency	Reporting Frequency
Priority pollutants	≥ 1 MGD	1/Year	Annual

B. DISINFECTION SYSTEM MONITORING

Samples from the disinfection system shall be collected from downstream of the disinfection system and analyzed by an ELAP certified laboratory per Title 22, section 60321(a). Depending upon the level of disinfection and recycled water application to land, monitoring requirements vary. For turbidity, sample shall be collected downstream of the filtration system, prior to disinfection.

Table 2. Disinfection System Monitoring

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Coliform Organisms	MPN100 mL	Grab	1/Day (note 1 below)	Annually
Turbidity	NTU	Meter	Continuous (note 2 below)	Annually

Table 2 Notes:

- Note 1. Once per day when recycled water is produced and discharged to the recycled water storage ponds for distribution to recycled water users.
- Note 2. Should the continuous turbidity meter and recorder fail to provide continuous monitoring for more than 2 hours over a 24-hour period and effluent from the filtration process is not diverted for retreatment, report hourly manual and/or grab sample results. A monthly summary shall be reported in the annual report.

C. POND SYSTEM MONITORING

Any pond(s) that contains and stores recycled water shall be monitored for the parameters listed in Table 3 below. If the Administrator permits a recycled water user that operates a recycled water storage pond, the pond containing recycled water shall also be monitored for the parameters listed in Table 3. These monitoring requirements apply only to ponds permitted through this General Order. Pond(s) covered by an existing order, such as a National Pollutant Discharge Elimination System (NPDES) permit or Waste Discharge Requirements (WDRs), shall continue to be monitored in accordance with that Order and the parameters listed below if not already required.

Table 3. Pond System Monitoring

Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
Freeboard	0.1 feet	Measurement	1/Monthly	Annually
Odors	---	Observation	1/Monthly	Annually
Berm Condition	---	Observation	1/Monthly	Annually

D. USE AREA MONITORING

The Administrator shall monitor use area(s) at a frequency appropriate to determine compliance with this General Order and the Administrator's recycled water use program requirements. The Administrator may assign monitoring responsibilities to a user as part of the Water Recycling Use Agreement (permit); the Administrator retains responsibility to ensure the data is collected, as well as prepare and submit the annual report.

The following shall be recorded for each user with additional reporting for use areas as appropriate. The frequency of use area inspections shall be based on the complexity and risk of each use area. Use areas may be aggregated to combine acreage for calculation or observation purposes. Use area monitoring shall include the following parameters:

Table 4. Use Area Monitoring

Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
Recycled Water User	--	--	--	Annually
Recycled Water Flow	gpd	Meter (note 1 below)	1/Month	Annually
Acreage Applied (note 2 below)	acres	calculated	--	Annually
Application Rate	in/ac/yr	calculated	--	Annually
Soil Saturation/ Ponding	--	observation	1/Quarter	Annually
Nuisance Odor/ Vector	--	observation	1/Quarter	Annually
Discharge Off-site (of usage site area(s))	--	observation	1/Quarter	Annually
Notification signage (note 3 below)	--	observation	1/Quarter	Annually

Table 4 Notes:

Note 1. Meter requires meter reading, a pump run time meter, or other approved method.

Note 2. Acreage applied denotes the acreage to which recycled water is applied.

Note 3. Notification signs shall be consistent with the requirements of California Code of Regulations, title 22, section 60310(g).

REPORTING REQUIREMENTS

In reporting monitoring data, the Administrator shall arrange the data in tabular form so that the date, data type (e.g., flow rate, bacteriological, etc.), and reported analytical or visual inspection results are readily discernible. The data shall be summarized to illustrate compliance with the General Order and NOA 2016-0068-DDW-R5005 as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported in the next regularly scheduled monitoring report and shall be included in calculations as appropriate.

A. ANNUAL REPORT

Annual Reports shall be submitted to the Regional Water Board by **1 April following the monitoring year**. The Annual Report shall include the following:

1. A summary table of all recycled water users and use areas. Maps may be included to identify use areas. Newly permitted recycled water users and use areas shall be identified. When applicable, supplement to the Title 22 Engineering Report and the State Water Board approval letter supporting those additions shall be included.
2. A summary table of all inspections and enforcement activities initiated by the Administrator. Include a discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or General Order. Copies of documentation of any enforcement actions taken by the Administrator shall be provided.
3. An evaluation of the performance of the recycled water treatment facility, including discussion of capacity issues, system problems, and a forecast of the flows anticipated in the next year.
4. Tabular summaries of all monitoring data collected during the year, including priority pollutant monitoring, if required. Graphical summaries of monitoring data for trend analysis when appropriate.
5. The name and contact information for the recycled water operator responsible for operation, maintenance, and system monitoring.

A letter transmitting the annual report shall accompany each report. The letter shall summarize the numbers and severity of violations found during the reporting period, and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Administrator or the Administrator's authorized agent:

"I certify under penalty of law that I have personally examined and am familiar with 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."

B. STATE WATER BOARD VOLUMETRIC ANNUAL REPORTING

Per State Water Resources Control Board's [Water Quality Control Policy](https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/) (https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/), amended in December 2018, dischargers of treated wastewater and recycled water are required to report annually monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. Recycled Water Policy Annual Reports are described in the City's NPDES permit.

C. DOCUMENT SUBMITTALS

The Discharger must submit all monitoring reports and analytical monitoring results to the State Water Resources Control Board's (State Water Board's) GeoTracker database. GeoTracker is an Internet-accessible database system used by the State Water Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. This system consists of a relational database, online compliance reporting features, a geographical information system (GIS) interface, and other features that are utilized by regulatory agencies, regulated industries, and the public to input, manage, or access compliance and regulatory tracking data.

GeoTracker Electronic Reporting Requirements. All monitoring reports and monitoring results shall be submitted to GeoTracker in accordance with the timeframes specified in this MRP and in searchable Portable Document Format (PDF). The Discharger shall follow the applicable Electronic Submittal of Information (ESI) requirements under the Facility-specific **Global Identification Number NPD100051486** at the [GeoTracker](https://geotracker.waterboards.ca.gov/esi/login.asp) database.
(<https://geotracker.waterboards.ca.gov/esi/login.asp>)

In order to submit reports electronically, the Discharger shall create a secure GeoTracker Electronic Submittal of Information (ESI) account and log in credentials, claim their facility by requesting access in GeoTracker, and finally uploading PDF copies of the required reports via the ESI portal as outlined in the GeoTracker ESI Beginner's Guide for Responsible Parties (Beginner's Guide) linked below. The Discharger may complete the above tasks by accessing the 'Getting Started' section on the GeoTracker [ESI webpage](https://www.waterboards.ca.gov/ust/electronic_submittal/index.html).
(https://www.waterboards.ca.gov/ust/electronic_submittal/index.html)

Additional GeoTracker support information can be found at the following:

- a. 'Guides/Resources' document link in the "Tools" on the Discharger's GeoTracker ESI account.
- b. Resources on the GeoTracker ESI website, such as the [Beginner's Guide](https://www.waterboards.ca.gov/ust/electronic_submittal/docs/geotracker_esi_rp_beginner_s_guide_revisedoct2019.pdf)
(https://www.waterboards.ca.gov/ust/electronic_submittal/docs/geotracker_esi_rp_beginner_s_guide_revisedoct2019.pdf)
- c. General GeoTracker Help Desk contact information:
Phone: 1-866-480-1028, Email: geotracker@waterboards.ca.gov

The Administrator shall implement the above monitoring program.

This Order is issued under authority delegated to the Executive Officer by the Central Valley Water Board pursuant to Resolution R5-2018-0057 and is effective upon signature.

for Patrick Pulupa, Executive Officer

GLOSSARY

CT	The product of total chlorine residual and modal contact time measured at the same point.
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots over a 24-hour period.

Frequency:

1/Day	Every day except weekends or holidays
2/Week	Twice per week on non-consecutive days
1/Week	Once per week
2/Month	Twice per month during non-consecutive weeks
1/Month	Once per calendar month
1/Quarter	Once per calendar quarter
1/Year or Annually	Once per year
2/Year or Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters

Units:

ac	Acres
in/ac/yr	Inch/acre/year
gpd	Gallons per day
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
mgy	Million gallons per year
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
NTU	Nephelometric Turbidity Units