

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-__

FOR

UNIVERSITY OF CALIFORNIA, DAVIS
USDA AQUATIC WEED CONTROL LABORATORY &
J. AMOROCHO HYDRAULICS LABORATORY
YOLO COUNTY

The Monitoring and Reporting Program (MRP) describes requirements for monitoring influent source water, effluent wastewater, and the disposal areas. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

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 sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *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);
- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and
- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health’s Environmental Laboratory Accreditation Program (ELAP). 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.

If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least eight consecutive monitoring events, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

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

INFLUENT MONITORING

Influent monitoring for the Aquatic Weed Lab and Hydraulics Lab shall be performed on UCD potable water and groundwater source Well C3C. Monitoring shall include at least the following:

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly

EFFLUENT MONITORING

Monitoring of Effluent without Herbicides

Effluent samples shall be collected upstream of the point of discharge to Pond 1, Hydraulics Lab Retention Basin 1, and the North and South Basins of the North Fork Cutoff as indicated in Attachment C and Attachment D. Effluent from Pond 2 into the South Basin does not need to be monitored. At a minimum, effluent shall be monitored as specified below:

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Continuous Flows ¹				
Volume	GPD	Meter reading	Daily	Quarterly
Total Dissolved Solids	mg/L	Grab	Monthly	Quarterly
Total Nitrogen	mg/L	Grab	Monthly	Quarterly

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Aquatic Weed Batch				
Volume	Gallons	Calculation	Per batch	Quarterly
Total Dissolved Solids	mg/L	Grab	Per batch	Quarterly
Total Nitrogen	mg/L	Grab	Per batch	Quarterly
Hydraulic Lab Batch Flows				
Volume	Gallons	Calculation	Per batch	Quarterly
Total Dissolved Solids	mg/L	Grab	Per batch	Quarterly

¹ Continuous is considered to be effluent flow for 28 consecutive days or more.

Monitoring of Effluent Containing Herbicides

Effluent samples shall be collected after granular activated carbon filtration and prior to discharge into Pond 1. Herbicide active ingredient monitoring shall account for all herbicides added to the holding tanks and any remaining herbicides since the last discharge. At a minimum, effluent shall be monitored as specified below:

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Discharge Volume	Gallons	Calculation	Per discharge	Quarterly
Total Dissolved Solids	mg/L	Grab	Per discharge	Quarterly
Total Nitrogen	mg/L	Grab	Per discharge	Quarterly
Herbicide Active Ingredients	µg/L	Grab	Per discharge	Quarterly

WASTEWATER POND AND BASIN MONITORING

The North Basin, South Basin, Hydraulics Lab Retention Basin 1, and Aquatic Weed Lab Ponds 1 and 2 shall be monitored as follows:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard ¹	0.1 feet	Staff Gage	Weekly	Quarterly
Levee Condition	--	Observation	Weekly	Quarterly
Odors	--	Observation	Weekly	Quarterly
pH ²	pH Units	Grab	Monthly ³	Quarterly
Dissolved Oxygen ²	mg/L	Grab	Monthly ³	Quarterly

¹ Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet.

² Samples shall be collected opposite the pond inlet at a depth of one foot.

- ³ Sampling is only necessary in the event that the pond or basin contains 2 feet or more of water.

AQUATIC WEED LAB EVAPORATION VAULT MONITORING

The evaporation vaults shall be inspected monthly and the following items shall be documented:

- a. Integrity evaluation of the fiberglass tanks, concrete secondary containment, roofing, and piping;
- b. Fill level of the fiberglass tanks;
- c. Presence of water in the secondary containment structure. If water is present, document how wastewater was stored, how much wastewater was stored, how any leaks were fixed, and how much wastewater was disposed at a permitted disposal facility prior to putting the evaporation tanks back in service. The monitoring report shall also make evaluation of whether further improvements are necessary to maintain the evaporation vault structure.

REPORTING

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleysacramento@waterboards.ca.gov.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email:

Attention: Compliance/Enforcement Section
University of California, Davis
USDA Aquatic Weed Control Lab & J. Amorocho Hydraulics Lab
Yolo County
Place ID: 268934

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
ECM Mailroom
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670

Please include a transmittal sheet that includes the following:

Attention: Compliance/Enforcement Section
University of California, Davis
USDA Aquatic Weed Control Lab & J. Amorocho Hydraulics Lab
Yolo County
Place ID: 268934

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., wastewater, groundwater, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports do not need to be included in the monitoring reports; however, all laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

In addition to the requirements of Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. Quarterly Monitoring Reports

Quarterly monitoring reports shall be submitted to the Central Valley Water Board on the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by **May 1st**). Each Quarterly Monitoring Report shall include the following:

1. Results of wastewater influent, effluent, wastewater pond and basin, and Aquatic Weed evaporation vault monitoring. Data shall be separated by facility and presented in a tabular format.
2. The cumulative volume of wastewater generated at the facility during the year to date;
3. A comparison of monitoring data to the requirements of the WDRs and an explanation of any violation of those requirements.
4. The flow-weighted average monthly TDS concentration shall be calculated using the following formula:

$$C_a = \frac{\sum_1^n (C_i \times V_i)}{\sum_1^n V_i}$$

- Where:
- C_a = Flow-weighted average monthly TDS concentration in mg/L
 - i = Designated number of the discharge source (e.g., Weed Control Lab holding tanks to Pond 1 = 1, Hydraulics Lab discharge to South Basin = 2, etc.)
 - C_i = TDS concentration for each discharge i in mg/L (monthly average TDS concentration for continuous flows or grab sample TDS concentration for batch flows)
 - V_i = Total volume of each discharge i in gallons (total monthly volume for continuous flows or individual batch flow volume)

5. Results of the Aquatic Weed Lab holding tanks shall include a tabulated list of all approved herbicides, their active ingredient(s), the reporting limit(s), effluent limit(s), and sampling results for the quarter.
6. If requested by staff, copies of laboratory analytical report(s).
7. A copy of inspection log page(s) documenting inspections completed during the quarter.
8. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has 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. The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
 PAMELA C. CREEDON, Executive Officer

 (Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CaCO ₃	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
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.
Daily	Every day except weekends or holidays.
Twice Weekly	Twice per week on non-consecutive days.
Weekly	Once per week.
Twice Monthly	Twice per month during non-consecutive weeks.
Monthly	Once per calendar month.
Bimonthly	Once every two calendar months (i.e., six times per year) during non-consecutive months.
Quarterly	Once per calendar quarter.
Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters.
Annually	Once per year.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
MTF	Multiple tube fermentation