



Central Valley Regional Water Quality Control Board

5 January, 2023

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Contra Costa Water District
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VIA EMAIL
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NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0006 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; CONTRA COSTA WATER DISTRICT, CONTRA COSTA CANAL REPLACEMENT PROJECT SEGMENT 5, CONTRA COSTA COUNTY

Our office received a Notice of Intent on 25 October 2022 from Contra Costa County Water District (hereinafter Discharger) for the Contra Costa Canal Replacement Project Segment 5 (hereinafter Project), for discharge of dewatered groundwater to surface water. The Discharger is currently covered under Notice of Applicability (NOA) R5-2016-0076-008 for Segments 3 and 4 of the Contra Costa Canal Replacement Project. The General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order) was renewed on 17 February 2022 as Order R5-2022-0006. Based on the application packet and subsequent information submitted by the Discharger, staff has determined that the Project meets the required conditions for approval under Limited Threat General Order R5-2022-0006, as a groundwater source project. The Project is hereby assigned Limited Threat General Order R5-2022-0006-009 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2022-0006-009**, in your correspondence and submitted documents.

The Project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed [Limited Threat General Order](#) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2022-0006_npdes.pdf).

CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order.

MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

Review of your water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of aluminum and manganese water quality objectives in the Delta Waterways (western portion), which is a water of the United States. However, the proposed treatment system addresses the water quality concern by reducing constituent(s) concentrations below water quality objectives; therefore, the Project qualifies for the Limited Threat General Order.

PROJECT DESCRIPTION

The Contra Costa Canal Replacement Project aims to convert the Contra Costa Canal (Canal) from an unlined canal to a buried pipe, with the benefits of enhanced water conservation, water quality, and public safety. The Project is located in eastern Contra Costa County, within the limits of the City of Oakley.

Construction of the Project (Segment 5) is scheduled to be split into two phases, Segment 5A and Segment 5B. Segment 5B will be completed first and is approximately 6,400 feet in length and extends from the pipeline downstream of the existing flood isolation structure near the Rock Slough Headworks to approximately 200 feet south of East Cypress Road. Segment 5A consists of approximately 650 feet of pipeline, that will fill the existing 200-foot forebay northwest of East Cypress Road and 200 feet of open canal south of the existing East Cypress Road once Segment 5B is completed. As part of Segment 5A, the Project includes replacement of 250 feet of siphons under East Cypress Road once the road is relocated (an independent project not covered by this NOA). Construction of both Segment 5A and Segment 5B will require construction dewatering, and discharge of dewatered groundwater to waters of the United States.

Segment 5B will be constructed first, beginning in December 2022 and lasting until Summer 2024, and discharge will be seasonal and intermittent. Dewatering will be accomplished by installing a series of temporary shallow groundwater wells spaced approximately 30 to 50 feet apart in the Project work area. While work is ongoing, groundwater would be pumped into a collection pipe at an average rate of approximately 0.5 to 2.5 million gallons per day (mgd) depending on the Segment phase (A or B) and canal length actively under construction. For Segment 5B, a daily maximum groundwater pumping rate of 3.8 mgd is possible.

Groundwater testing conducted as part of this permit application, shows that electrical conductivity (EC) is expected to be approximately 4,600 $\mu\text{mhos/cm}$. In order to address potential whole effluent toxicity (WET) associated with salinity, pumped shallow groundwater will be blended with surface water collected from behind Rock Slough Fish Screen, to which Contra Costa Water District has water rights. The specific blending ratio will target a final fully mixed discharge EC of approximately 2,000 $\mu\text{mhos/cm}$. Dilution water collected from behind the Rock Slough Fish Screen will be blended at approximately 2 parts dilution water to 1 part groundwater prior to discharge. Estimated total discharge volumes will vary by segment phase. For Segment 5B, the total discharge volume is estimated to be 2,814 acre-feet (dilution water plus groundwater).

For Segment 5A, the total discharge volume is estimated to be 705 acre-feet (dilution water plus groundwater).

To ensure that the discharge of blended groundwater does not recirculate within Rock Slough, the District intends to discharge into Sand Mound Slough on the downstream side of the Reclamation Flap Gate. The Reclamation Flap Gate allows only unidirectional downstream flow of river water into Sand Mound Slough and prohibits flow reversals back into Rock Slough. Sand Mound Slough is located within the Delta Waterways (western portion), which is a water of the United States.

DISCHARGE PROHIBITIONS

Discharge prohibitions are specified in Section IV Discharge Prohibitions of the Limited Threat General Order. Based on the information provided in the NOI, the following discharge prohibitions are applicable to this discharge:

- Prohibition IV.A
- Prohibition IV.B
- Prohibition IV.C
- Prohibition IV.D.

EFFLUENT LIMITATIONS

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the NOI, effluent limitations are only required for the parameter identified in items 1-6, below:

1. **Flow (Section V.A.1.a).** The flow rate shall not exceed 12 MGD.
2. **pH (Section V.A.1.b.i).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.
3. **Whole Effluent Toxicity, Chronic (Section V.A.2.a).** There shall be no chronic toxicity in the discharge.
4. **Temperature.** For discharges within the legal boundaries of the Sacramento-San Joaquin Delta, the maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 4°Fahrenheit (°F).
5. **Diazinon and Chlorpyrifos.** For water bodies as specified in Table 3-4 of the Basin Plan for the Sacramento and San Joaquin River Basin, effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:
 - i. Average Monthly Effluent Limitation (AMEL)
$$\text{SAMEL} = \text{CD M-avg}/0.079 + \text{CC M-avg}/0.012 \leq 1.0$$

CD M-AVG = average monthly diazinon effluent concentration in µg/L
 CC M-AVG = average monthly chlorpyrifos effluent concentration in µg/L

ii. Maximum Daily Effluent Limitation (MDEL)

$$\text{SAWEL} = \text{CD W-avg}/0.16 + \text{CC W-avg}/0.025 \leq 1.0$$

CD W-AVG = average weekly diazinon effluent concentration in µg/L

CC W-AVG = average weekly chlorpyrifos effluent concentration in µg/L

6. Constituents and Parameters of Concern (Section V.A.1.e). The following constituents and parameters in Table 1 below have been identified as having reasonable potential to cause or contribute to an in-stream excursion from water quality objectives and shall not exceed the effluent limitations as listed.

Table 1. Effluent Limitations for Constituents and Parameters of Concern

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Parameters
Aluminum, Total	µg/L	310	620	V.A.1.e
Manganese, Total	µg/L	80	160	V.A.1.e

Delta Waterways (Western Portion) are listed for arsenic, chlordane, chlorpyrifos, DDT (Dichlorodiphenyltrichloroethane), diazinon, dieldrin, electrical conductivity, group A pesticides, invasive species, mercury, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), total DDT and toxicity on the Clean Water Act 303(d) List of impaired water bodies. A Total Maximum Daily Load (TMDL) has not yet been established for Delta Waterways (Western Portion). Therefore, no additional 303(d) based effluent limitations or monitoring requirements are included in this NOA).

RECEIVING WATER LIMITATIONS

The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the NOI, only the following receiving surface water limitations are applicable to this discharge:

- Bacteria (VIII.A.2);
- Biostimulatory substances (VIII.A.3);
- Chemical constituents (VIII.A.4);
- Color (VIII.A.5);
- Dissolved oxygen (VIII.A.6.b.iii);
- Floating material (VIII.A.7);
- Oil and grease (VIII.A.8);
- pH (VIII.A.9.a);
- Pesticides ((VIII.A.10);
- Radioactivity (VIII.A.11);
- Suspended sediments (VIII.A.12);
- Settleable substances (VIII.A.13);
- Suspended material (VIII.A.14);
- Taste and odors (VIII.A.15);
- Temperature (VIII.A.16.b);
- Toxicity (VIII.A.17); and
- Turbidity (VIII.A.18.a).

SPECIAL PROVISIONS

The Limited Threat General Order contains Provisions in Section IX.C. Based on information provided in the NOI the following site-specific special provisions are applicable to the Project.

Salinity Evaluation and Minimization Plan – The Limited Threat General Order in Section IX.C.3.c requires Dischargers with projects greater than or equal to 180 days in duration to submit and implement a Salinity Evaluation and Minimization Plan to identify and address sources of salinity discharged from the Facility. Given the Project location and salinity levels in the groundwater, best management practices through implementation of a Salinity Evaluation and Minimization Plan are necessary to manage salinity levels. A Salinity Evaluation and Minimization Plan shall be submitted by **1 April 2023**.

For enrollees under the Salinity Control Program's Alternative Salinity Permitting Approach, Table 15 of the Limited Threat General Order includes performance-based electrical conductivity (EC) triggers to be included in the NOA to ensure the Salinity Evaluation and Minimization Plan is effective. The Discharger submitted a Notice of Intent for the Salinity Control Program in October 2022 indicating its intent to comply with the Alternative Salinity Permitting Approach and participate in the CV-SALTS Prioritization and Optimization Study. Based on effluent EC data from November 2021 to June 2022, the maximum effluent concentration for EC was 4,600 µmhos/cm, which

results in an **annual average EC effluent trigger of 3,800 µmhos/cm** per Table 15 of the Limited Threat General Order. If the calendar annual average effluent EC exceeds 3,800 µmhos/cm, the Salinity Evaluation and Minimization Plan shall be reviewed and updated. The updated Salinity Evaluation and Minimization Plan shall be submitted by 1 April following the calendar year in which the electrical conductivity concentration exceeded the trigger.

MONITORING AND REPORTING

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the effluent Sand Mound Slough in accordance with Attachment C of the Limited Threat General Order.

Monitoring Locations – The Discharger shall monitor the effluent and receiving water at the specified location as follows:

Table 2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to Sand Mound Slough.
	RSW-001	Sand Mound Slough, approximately 200 feet upstream from the point of discharge.
	RSW-002	Sand Mound Slough, approximately 200 feet downstream from the point of discharge.

Effluent Monitoring – When discharging to surface water, the Discharger shall monitor the effluent at EFF-001 in accordance with Table C-3 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 3 and subsequent Table 3 Notes:

Table 3. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Discharge Flow Rate	MGD	Calculated	1/Day
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Week
pH	standard units	Grab	1/Week
Turbidity	NTU	Grab	1/Week
Temperature	°F	Grab	1/Week
Dissolved Oxygen (DO)	mg/L	Grab	1/Week
Aluminum, Total	µg/L	Grab	1/Month
Manganese, Total	µg/L	Grab	1/Month

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chronic Toxicity	--	Grab	1/Project Term

Table 3 Notes

1. **Electrical conductivity, pH, temperature, and DO.** A hand-held field meter may be used, 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.
2. **All parameters, except flow.** 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.
3. **Chronic toxicity.** Chronic toxicity testing shall be conducted within 3 months of initiation of discharge. See the Monitoring and Reporting Program (Attachment C) for toxicity monitoring requirements.

Section II.B.2 of the Limitations and Discharge Requirements section of the Limited Threat General Order requires that dischargers submit new analytical results every 5 years for pollutants specified in Table I-1 of Attachment I. The Project is considered a groundwater source discharge. Therefore, the Discharger shall submit monitoring results by **01 November 2027** for the following constituents shown in Table 4 and subsequent Table 4 Notes, below:

Table 4. Effluent Characterization Monitoring

Parameter	Units	Sample Type
Aluminum, Total	µg/L	Grab
Biochemical Oxygen Demand (BOD)	mg/L	Grab
Total Suspended Solids (TSS)	mg/L	Grab
Dissolved Oxygen (DO)	mg/L	Grab
Hardness	mg/l	Grab
pH	standard units	Grab
Temperature	°F	Grab
Electrical Conductivity @ 25 °C	µmhos/cm	Grab
Total Dissolved Solids (TDS)	mg/L	Grab
Turbidity	NTU	Grab
Unionized Ammonia Nitrogen, Total (as N)	mg/L	Grab
Chlorine, Total Residual	mg/L	Grab
CTR Priority Pollutants	See Attachment I, Table I-3 of the Limited Threat General Order	See Attachment I, Table I-3 of the Limited Threat General Order

Table 4 Notes

1. **For all parameters.** The Discharger is not required to conduct effluent

monitoring for constituents that have already been sampled in a given month, as required in Table E-3, except for hardness, pH, and temperature, which shall be conducted concurrently with the effluent sampling.

2. **For 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.
3. **For DO, pH, temperature, electrical conductivity, TDS, and turbidity.** A hand-held field meter may be used, 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.
4. **For CTR Priority Pollutants.** See Attachment I, Table I-3 of the Limited Threat General Order.

Receiving Water Monitoring - When discharging to surface water, the Discharger shall monitor the receiving water at RSW-001 and RSW-002, in accordance with Table C-5 of the Limited Threat General Order and this NOA. If there is no upstream receiving water flow, monitoring at RSW-001 is not required and the self-monitoring report shall state that monitoring was not conducted due to no upstream receiving water flow. The applicable monitoring requirements are as follows in Table 5 and subsequent Table 5 Notes:

Table 5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Month
Temperature	°F	Grab	1/Month
Turbidity	NTU	Grab	1/Month
Aluminum, Total	µg/L	Grab	1/Month
Manganese, Total	µg/L	Grab	1/Month

Table 5 Notes

1. **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.
2. **Electrical conductivity, pH, temperature, and DO..** A hand-held field meter may be used, 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 by the Discharger.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens, or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

Monitoring Report Submittals - Monitoring in accordance with this NOA shall begin upon the date of this NOA. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the **Fourth Quarter 2022**. This report shall be submitted on **1 February 2023**. All Monitoring Reports shall specify the dates during the monitoring period the discharge did or did not occur. If treatment and discharge has not begun there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 5, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

Table 6. Monitoring Periods and Reporting Schedule

Monitoring Period for All Sampling Frequencies	Quarterly Report Due Date
First Quarter (1 January through 31 March)	1 May
Second Quarter (1 April through 30 June)	1 August
Third Quarter (1 July through 30 September)	1 November
Fourth Quarter (1 October through 31 December)	1 February of the following year

GENERAL INFORMATION AND REQUIREMENTS

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of each new discharge, 2) noncompliance, and 3) when the discharge ceases. The Central Valley Water Board shall be notified immediately if any effluent limit violation is observed during implementation of the project.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the

Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

ENFORCEMENT

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory

Minimum Penalty (MMP) of \$3,000 per violation. In addition, late Monitoring Reports may be subject to MMPs or discretionary penalties of up to \$1,000 per day late. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

COMMUNICATION

We have transitioned to a paperless office; therefore, please convert all documents to a searchable Portable Document Format (pdf). All documents, including Monitoring Reports, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance and Enforcement Unit, Attention: Mohammad Farhad, at centralvalleysacramento@waterboards.ca.gov and mohammad.farhad@waterboards.ca.gov. Mr. Farhad may also be reached by phone at (916) 464-1181.

Please include the following information in the body of the email:

- Attention: NPDES Compliance Unit
- Discharger: Contra Costa Water District
- Facility: Contra Costa Canal Replacement Project Segment 5
- County: Contra Costa County
- CIWQS place ID: 795798

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive and mailed to our office, attention "ECM Mailroom-NPDES".

Mark Seedall
Senior Planner
Contra Costa County Water District

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5 January 2023
Contra Costa Canal Segment 5
R5-2022-0006-009

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water 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 Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, 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 Board by 5:00 p.m. on the next business day. Links to the law and regulations applicable to filing petitions may be found on the [Petitions Home Page](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

Patrick Pulupa, Executive Officer

Enclosures (2): Attachment A - Project Location Map
 Monitoring Report Transmittal Form (Discharger only)

cc: Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)
 Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)
 Prasad Gullapalli, U.S. EPA Region IX, San Francisco (email only)
 Division of Water Quality, State Water Board, Sacramento (email
 only)
 Sarah Torres, PG Environmental, Chantilly, Virginia (via email)

