CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CAG995002
ORDER R5-2022-0006-03

WASTE DISCHARGE REQUIREMENTS
LIMITED THREAT DISCHARGES TO SURFACE WATER

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Dischargers:	Individuals, public agencies, private businesses, and other legal entities discharging the following: • Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. • Discharges that may contain toxic organic constituents, volatile organic compounds, petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and/or other chemical constituents that require treatment prior to discharge. • Discharges of clean or treated drainage from mines (also known as liquid mine waste).

Table 2. Administrative Information

This Order was Adopted on:	**17 February 2022**
This Order shall become effective on:	**1 April 2022**
This Order shall expire on:	**31 March 2027**
Those enrollees who are covered under this Order at the time of expiration will continue to be covered until coverage becomes effective under a reissued Order.	
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as a minor discharge.	

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **17 February 2022**, amended by Order R5-2023-0015 on **27 April 2023**, amended by Order R5-2023-0058 on 14 December 2023 and amended by Order R5-2024-0044 on **23 August 2024**.

Patrick Pulupa Date: 2024.09.16 15:23:16 -07'00'

Water Boards

PATRICK PULUPA, Executive Officer

WASTE DISCHARGE REQUIREMENTS
TABLE OF CONTENTS

TABLES

ATTACHMENTS

I. DISCHARGE INFORMATION

This Limited Threat General Order applies to individuals, public agencies, private businesses, and other legal entities (hereafter Dischargers) discharging limited threat wastewater to waters of the United States as follows:

- Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality which include the following:
    - Well Development Water
    - Construction Dewatering
    - Pump/Well Testing
    - Pipeline/Tank Pressure Testing
    - Pipeline/Tank Flushing or Dewatering
    - Condensate
    - Water Supply System
    - Aggregate Mine
    - Filter Backwash Water
    - Ambient Streamflow Augmentation
        - The sole purpose is to augment ambient streamflow conditions to support aquatic organisms during times of low streamflows where conditions threaten survival of aquatic organisms.
    - Other wastewater that does require treatment
- Wastewater that may contain toxic organic constituents, volatile organic compounds (VOCs), petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and other chemical constituents for which treatment technologies are well-established to eliminate constituents that pose a threat to water quality and that require treatment prior to discharge including:
    - Superchlorination project wastewater that does not meet effluent limitations without treatment
    - Equipment decontamination wastewater that does not meet effluent limitations without treatment
    - Cleanup site wastewater that does not meet effluent limitations without treatment

- Groundwater cleanup of petroleum fuel pollution

- Liquid mine waste with or without treatment.

- Alum application to reduce phosphorous in receiving waters. For the purposes of this permit, the term “alum” will be used to describe the class of chemicals used to sequester phosphorous that have aluminum as their active ingredient (such as aluminum sulfate and sodium aluminate).

II. Notification Requirements

A. General Order Application – Notice of Intent (NOI)

It is the responsibility of the Discharger to obtain coverage under this Limited Threat General Order prior to commencement of any discharge to surface waters. To obtain coverage under this General Order, which also serves as the National Pollutant Discharge Elimination System (NPDES) Permit, the Discharger must submit a complete NOI, as detailed below and in Attachment J.

1. **Requirements for all Discharges.** The following documents and information must be submitted as part of the NOI:

   a. State Water Board Form 200;

   b. A full description of the proposed project on official letterhead that includes the items listed in section 2 of Attachment J;

   c. A project map showing the location of the project, discharge points, receiving water(s), and effluent and receiving water monitoring locations;

   d. The fee for enrollment under this Order for discharges that require minimal or no treatment systems to meet limits and their only purpose is to augment ambient streamflow conditions to support aquatic organisms during times of low streamflows where conditions threaten survival of aquatic organisms shall be based on Category 4 in section 2200(b)(10) of title 23, California Code of Regulations. The fee for all other enrollments under this Order shall be based on Category 3 in section 2200(b)(10) of title 23, California Code of Regulations. Checks must be made payable to the State Water Resources Control Board. The current fee schedule is available on the Water Quality Fees Webpage (https://www.waterboards.ca.gov/resources/fees/water_quality/) under NPDES Permits.

   e. Discharge type (see section 4 of the Notice of Intent, Attachment J);

   f. An evaluation of disposal/reclamation options (see section 5 of the Notice of Intent, Attachment J);

g. Analytical results of water sampling for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged;

h. The Salt Control Program Notice of Intent (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/forms_temps_guide/salt_noi_form.pdf) (see section 7 of the Notice of Intent, Attachment J);

i. Certification by authorized personnel (see section 12 of the Notice of Intent, Attachment J).

2. **Additional Requirements for Specific Discharges.** The Discharger must complete all sections that apply to the proposed discharge and submit with the NOI unless specified otherwise below.

a. Salinity Evaluation and Minimization Plan. Dischargers with projects greater than or equal to 180 days in duration shall submit and implement a Salinity Evaluation and Minimization Plan to identify and address sources of salinity discharged from the Facility. The plan shall be completed and submitted to the Central Valley Water Board by the due date in the NOA. Under limited circumstances when groundwater is naturally high in salinity and source control is infeasible, for example construction dewatering projects, the requirement to submit a Salinity Evaluation and Minimization Plan may not be specified in the NOA.

b. Discharges to Impaired Water Bodies. The list of impaired surface waters can be found under the federal Clean Water Act (CWA) section 303(d) List on the Impaired Waters List Webpage (http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list). Additional requirements for discharges to impaired water bodies pursuant to CWA section 303(d):

i. Analytical results of sampling of the proposed discharge for pollutants causing impairment under CWA section 303(d) List, if applicable.

ii. Demonstration of adequate treatment to ensure compliance at the point of discharge (i.e., end-of-pipe) or application for intake water credits (complete section d or e directly below).

c. Discharges from Drinking Water Supply Systems. Drinking water supply systems are covered by State Board General Order WQ 2014-0194-DWQ. However, some drinking water supply systems are not covered by WQ 2014-0194-DWQ. Additional requirements for discharges from drinking water supply systems include:

i. The information required in Attachment D, section III.B.2 if applying for an exception to priority pollutant criteria and objectives (including monitoring requirements and effluent limitations), as allowed by section 5.3 of the Policy

for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP); and/or

ii. A Pollution Prevention and Monitoring and Reporting Plan (PPMRP), as outlined in Attachment F, if the project includes more than one existing or proposed discharge point.

iii. Upon completion of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The certification shall be submitted with the Request for Termination of Coverage, Attachment E.

d. Intake Water Credits. When the intake water is from the same water body as the receiving water body and monitoring data of the source water indicates that the source water is above the screening levels in Attachment I, then the discharge may qualify for intake water credits granted in accordance with section 1.4.4 of the SIP. The Executive Officer of the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will decide whether to authorize the intake water credit on a pollutant-by-pollutant and discharge-by-discharge basis. The Executive Officer will base the decision on the monitoring data included with the NOI and other information submitted by the Discharger, and the requirements specified in the SIP, section 1.4.4, and listed in Attachment D, section III.B.4. Additional requirements for application for intake water credits include:

i. A written request for an intake water credit on a pollutant-by-pollutant basis (Attachment G). The written request must be prepared in accordance with the NOI requirements specified in Attachment J.

ii. Analytical results of sampling of the intake water for the pollutants for which intake water credits are requested.

e. Wastewater that Requires Treatment Prior to Discharge. Where treatment is required to reduce pollutants to levels that will meet the effluent limitations prior to discharging to surface waters, the Discharger is required to submit the following:

i. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations. The treatment methods proposed by the Discharger must use common, already well-studied, well-tested, and well-used technologies, previously demonstrated and acknowledged to perform as expected and as stated.

ii. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.

f. Alum Application Plan (AAP). Dischargers that are applying alum for phosphorous sequestration need to submit and implement an Alum Application Plan (AAP) as required in Sections V.B.6 and IX.C.6.b and described in Attachment K.

B. General Order Coverage

1. New Discharges

Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a Notice of Applicability (NOA) to the Discharger. The NOA will specify that the discharge is authorized under the terms and conditions of this General Order and will indicate applicable effluent limitations required by this General Order and monitoring and reporting program requirements. New discharges that are not covered by an existing individual or general NPDES permit may not commence discharging until issuance of a NOA. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

Every 5 years from the date of issuance of a NOA or the previous characterization study or as specified in the NOA by the Executive Officer, whichever occurs first, the Discharger shall perform a characterization study. The characterization study includes sampling the effluent, and the receiving water if required in the NOA, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged or as specified in the NOA. For Dischargers applying alum for phosphorous sequestration, updated baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a NOA from the Executive Officer.

2. Existing Discharges

Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2016-0076-01 (NPDES Permit CAG995002) are automatically authorized under this General Order to continue discharging.

New analytical results for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged must be submitted every 5 years or less from the effective date of the current NOA. Those dischargers that last submitted the suite of analytical results specified in Table I-1 of Attachment I more than 5 years ago must submit updated data with an acceptable NOI within 180 days of the effective date of this Order. For Dischargers applying alum for phosphorous sequestration, updated

baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

Upon submittal of an acceptable NOI, the Executive Officer will issue a revised NOA, indicating any new and continuing effluent limitations required by this General Order and monitoring and reporting program requirements pursuant to Water Code section 13383. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

3. Changes in Discharge/Coverage

Eligible changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the NOA by the Executive Officer.

a. Notify the Executive Officer 60 days prior to planned or expected changes to the wastewater and/or to the treatment system.

b. Notify the Executive Officer within 60 days after receipt of laboratory results indicating unplanned or unexpected changes to wastewater.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g., submittal of a modified NOI to the Executive Officer), including applicable laboratory analyses, the Executive Officer may issue a revised NOA for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary and/or a discharge no longer qualifies for this Order, the Discharger must immediately apply for an individual NPDES permit. See the Fact Sheet for further discussion of anti-backsliding and antidegradation issues.

4. Termination of Discharge/Coverage

Upon cessation of the discharge, the Discharger shall request, using the Request for Termination of Coverage in Attachment E, official termination of coverage under this General Order from the Executive Officer. The Discharger is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee and monitoring reports associated with this General Order until the Discharger receives a Notice of Termination (NOT) from the Executive Officer. Upon receipt of the NOT, the Discharger will no longer be authorized to discharge wastewater covered by this General Order. Failure to submit the annual fee and monitoring reports may subject the Discharger to mandatory minimum penalties or discretionary penalties.

a. When the Central Valley Water Board issues an individual NPDES permit or Waste Discharge Requirements (WDRs) with more specific requirements to a

Discharger, the applicability of this General Order to that Discharger is automatically terminated on the effective date of the individual permit or WDRs.

b. Dischargers with drinking water supply systems authorized to discharge under this General Order who have been granted an exception to the priority pollutant criteria and objectives in the California Toxics Rule (CTR) and SIP, as allowed by section 5.3 of the SIP, must provide certification by a qualified biologist that the beneficial uses of the receiving water have been restored upon completion of the discharge. The certification must be submitted with the Request for Termination of Coverage, Attachment E.

5. Expiration of General Order

This General Order will expire five (5) years after the effective date, as specified on the cover page of this General Order. In accordance with the Code of Federal Regulations (C.F.R.) 40 C.F.R. section 122.6, if the permit is not reissued by the expiration date, the conditions of this General Order will continue in force and effect until a new General Order is issued.

C. Eligibility Criteria

To be authorized by this General Order, all Dischargers shall comply with the terms and provisions of this General Order and must demonstrate that the discharge or proposed discharge meets the following criteria:

1. The wastewater does not contain sewage of human origin;

2. The discharge point is to a surface water or surface water drainage course;

3. All discharges to CWA section 303(d) listed waters shall not exceed the applicable criteria or comply with established Total Maximum Daily Loads (TMDLs), at the point of discharge;

4. A representative sample of the wastewater or representative samples of receiving water, as applicable, have been analyzed for the constituents listed in Table I-1 of Attachment I;

5. The analytical test results of the wastewater from Step 4 above, have been compared to the screening levels for the constituents listed in Attachment I;

6. If the analytical test results of the wastewater show that constituent concentrations exceed the screening levels listed in Attachment I, treatment will be required for the discharge.

7. Except for any pollutant eligible for an intake water credit, pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to an excursion above any applicable federal water quality criterion established by U.S. EPA pursuant to CWA section 303;

8. Except for any pollutant eligible for an intake water credit, pollutant concentrations in the discharge, do not cause, have a reasonable potential to cause, or contribute to an excursion above any water quality objective adopted by the Central Valley Water Board or State Water Resources Control Board (State Water Board), including prohibitions of discharge for the receiving waters;

9. The effluent discharge meets the Effluent Limitations in this Order as specified in the NOA if the discharge does not qualify for intake water credit.

III. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Legal Authorities. This Order serves as waste discharge requirements (WDR's) pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for limited threat point source discharges, as described herein, to surface waters.

40 C.F.R. section 122.28 authorizes U.S. EPA and approved states to issue general permits to regulate a point source category if the sources:

1. Involve the same or substantially similar types of operations;

2. Discharge the same type of waste;

3. Require the same type of effluent limitations or operating conditions;

4. Require similar monitoring; and

5. Are more appropriately regulated under a general permit rather than individual permits.

On 22 September 1989, U.S. EPA granted the State of California, through the State Water Board and the Regional Water Boards, the authority to issue general NPDES permits pursuant to 40 C.F.R. parts 122 and 123.

B. Basin Plans. The Central Valley Water Board adopted a Water Quality Control Plan, Fifth Edition, February 2019, for the Sacramento and San Joaquin River Basins and a Water Quality Control Plan, Third Edition, May 2018, for the Tulare Lake Basin (hereinafter Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plans. Requirements in this Order implement the Basin Plans.

C. Background and Rationale for Requirements. The Central Valley Water Board developed the requirements in this Order based on readily available information and permit requirements for several similar dischargers and the requirements contained in Order R5-2016-0076-01. The Fact Sheet (Attachment D), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through C, E through I, and K are also incorporated into this Order.

D. Monitoring and Reporting. 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program, as specified in the NOA and in Attachment F, establishes monitoring and reporting requirements to implement federal and State requirements.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13383, which states the following:

> (a) The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters…
>
> (b) The state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.
>
> (c) The state board or a regional board may inspect the facilities of any person subject to this section pursuant to the procedure set forth in subdivision (c) of Section 13267.

The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet (Attachment D).

E. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment B. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The Central Valley Water Board has also included in this Order special provisions applicable to the Dischargers. The rationale for the special provisions contained in this Order is provided in the Fact Sheet (Attachment D).

F. Notification of Interested Persons for this General Order. The Central Valley Water Board has notified potential and existing Dischargers and interested agencies and persons of its intent to prescribe WDRs for limited threat waste discharges and has

provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet (Attachment D).

G. Consideration of Public Comment for this General Order. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to limited threat wastewater discharges to surface water or surface water drainage courses. Details of the Public Hearing are provided in the Fact Sheet (Attachment D).

H. Notification of Interested Parties for Individual NOAs. It is the intent of this General Order that the public comment period for this General Order shall be adequate for the enrollees under this Order. However, there may be individual discharges that, due to the threat to water quality, complexity of the discharge, and/or extent of public concern, require a public comment period and Board hearing, which will be determined at the discretion of the Executive Officer. Details of the notification will be provided in the NOA for the project.

I. Consideration of Public Comment for Individual NOAs. For those NOAs that require a public comment period and Board hearing at the discretion of the Executive Officer, the Central Valley Water Board, in a public meeting, will hear and consider all comments pertaining to individual limited threat wastewater discharges to surface water or surface water drainage courses. Details of the Public Hearing will be provided in the NOA for the project.

THEREFORE, IT IS HEREBY ORDERED that Limited Threat General Order R5-2016-0076-01 (Waste Discharge Requirements for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water), 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 CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this General Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for past violations of the previous Orders.

IV. DISCHARGE PROHIBITIONS

A. The discharge of wastes, other than those described in section I and meeting the eligibility criteria in section II.C of this General Order, is prohibited unless the Discharger obtains a waiver, coverage under another general order, or coverage under an individual Order that regulates the discharge of such wastes.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment B).

C. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. Flow. If required in the NOA, discharges exceeding the discharge flow rate specified in the NOA are prohibited.

V. EFFLUENT LIMITATIONS

The NOA will contain applicable final effluent limitations for each specific Discharger that shall be based on the effluent limitations shown below in this Order. The discharge shall not exceed the final effluent limitations for the constituents and parameters identified in the NOA from the Executive Officer:

A. Water Quality-Based Effluent Limitations

1. All Discharges

a. **Flow.** The discharge flow rate, discharge duration, and/or total volume of discharge shall not exceed the limitations specified in the Notice of Applicability.

b. **pH.**

i. The pH of all 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.

ii. The pH of all discharges to Goose Lake in Modoc County shall at all times be within the range of 7.5 and 9.5.

iii. The pH of all discharges within the Tulare Lake Basin shall at all times be within the range of 6.5 and 8.3.

c. **Pesticides.**

i. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the discharge at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer for the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for the Tulare Lake Basin.

ii. Thiobencarb shall not be discharged in excess of 1.0 µg/L for the Sacramento and San Joaquin River Basins.

iii. For other pesticides not listed here, see the Pesticide Water Quality Objective in the Basin Plans.

d. **Salinity.** The salinity of all discharges within the Sacramento and San Joaquin River Basins and within the Tulare Lake Basin shall not exceed any applicable TMDLs, Delta standards, or Basin Plan water quality objectives or numeric limits. Effluent limitations shall be established on a water-body-specific basis, as

applicable and shall be as electrical conductivity (EC), total dissolved solids (TDS), chloride, and/or boron. Absent a site-specific numeric salinity water quality objective, **dischargers under the Salt Control Program's Conservative Permitting Approach shall not exceed the following effluent limitations, as specified in the Notice of Applicability:**

i. **Discharges to Receiving Waters with the Agricultural Supply (AGR) Beneficial Use, Electrical Conductivity.** The monthly average effluent electrical conductivity shall not exceed 700 µmhos/cm.

ii. **Discharges to Receiving Waters with the Municipal and Domestic Supply (MUN) Beneficial Use, Electrical Conductivity.** For a calendar year, the annual average effluent electrical conductivity shall not exceed 900 µmhos/cm.

For receiving waters designated with both the AGR and MUN Beneficial Use, the more stringent effluent limitation shall apply. For discharges where a site-specific numeric salinity objective has been developed and adopted into the Basin Plan for the protection of the AGR beneficial use and/or MUN beneficial use, the Board shall continue to apply that objective, as appropriate.

e. **Constituents and Parameters of Concern.** The constituents and parameters, subject to effluent limitations as identified in the NOA from the Executive Officer, shall not exceed the effluent limitations in Table 3A for discharges to receiving waters with MUN and Table 3B for discharges to receiving waters without MUN below:

Table 3A. Effluent Limitations for Constituents and Parameters of Concern (MUN)

Parameter	Units	Average Monthly Effluent Limitation (AMEL)	Maximum Daily Effluent Limitation (MDEL)
Aluminum, Total	µg/L	310	620
Iron, Total	µg/L	470	930
Manganese, Total	µg/L	80	160
Nitrate Nitrogen, Total (as N)	mg/L	10	20
Nitrite (as N)	mg/L	1	2
Total Residual Chlorine	mg/L	0.01	0.02

Table 3B. Effluent Limitations for Constituents and Parameters of Concern (No MUN)

Parameter	Units	AMEL	MDEL
Aluminum, Total	µg/L	See Tables 4A through 4I	See Tables 4A through 4I
Total Residual Chlorine	mg/L	0.01	0.02

Table 3A and 3B Note:

1. **Aluminum.** Effluent limitations in Table 3A for aluminum are derived from the Secondary MCL for protection of the MUN beneficial use. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria. Effluent Limitations in Tables 4A through 4I for aluminum are the 2018 U.S. EPA National Ambient Water Quality Criteria (NAWQC) for protection of freshwater aquatic life and are based on dissolved organic carbon, hardness, and pH results submitted with the Notice of Intent. For discharges to MUN designated water bodies, final effluent limitations for aluminum will be set based on the more stringent aluminum effluent limitation listed in either Table 3A or Tables 4A through 4I. For discharges to water bodies without a MUN designation, aluminum effluent limitations will be based on Tables 4A through 4I.

2. **Iron and Manganese.** Effluent limitations are based on the Secondary Maximum Contaminant Levels for taste and odor. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria. The effluent limitations are only applicable for discharges lasting more than one year from project start date (both continuous and intermittent).

Table 4A. Effluent Limitations for Aluminum, 0 mg/L ≤ DOC < 1 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	76	150	110	230	130	260	140	280	160	310	170	340	190	380	200	410	200	410
6.6 ≤ pH < 6.7	90	180	130	260	150	300	160	310	170	340	190	380	200	410	220	440	230	460
6.7 ≤ pH < 6.8	110	210	150	300	160	330	180	360	200	390	200	410	220	440	240	480	250	490
6.8 ≤ pH < 6.9	120	250	170	340	190	380	200	410	210	430	230	460	250	490	260	530	270	540
6.9 ≤ pH < 7.0	150	300	200	390	210	430	230	460	250	490	250	510	270	540	290	570	290	590
7.0 ≤ pH < 7.2	190	380	240	480	260	530	280	560	290	590	300	610	320	640	340	670	340	670
7.2 ≤ pH < 7.4	240	480	320	640	340	690	360	720	380	760	380	770	400	800	410	820	410	820
7.4 ≤ pH < 7.6	290	590	410	820	440	890	470	940	480	970	490	990	500	1,000	510	1,000	520	1,000
7.6 ≤ pH < 7.8	340	690	480	970	550	1,100	570	1,100	610	1,200	620	1,200	630	1,300	640	1,300	640	1,300
7.8 ≤ pH < 8.0	390	780	500	1,000	600	1,200	650	1,300	700	1,400	750	1,500	760	1,500	780	1,600	790	1,600
8.0 ≤ pH < 8.5	430	860	540	1,100	600	1,200	600	1,200	650	1,300	700	1,400	750	1,500	800	1,600	850	1,700
pH > 8.5	230	460	210	420	200	400	190	390	180	370	180	360	170	350	170	340	160	330

Table 4B. Effluent Limitations for Aluminum, 1 mg/L ≤ DOC < 2 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	130	260	190	380	210	430	240	480	260	530	280	560	310	620	340	670	350	710
6.6 ≤ pH < 6.7	160	310	200	410	240	480	250	510	280	560	290	590	330	660	350	710	370	740
6.7 ≤ pH < 6.8	180	360	230	460	250	510	280	560	290	590	320	640	340	690	370	740	380	770
6.8 ≤ pH < 6.9	200	410	250	510	280	560	300	610	320	640	340	670	360	720	390	790	400	800
6.9 ≤ pH < 7.0	230	460	290	570	310	620	330	660	340	690	360	720	380	770	420	840	430	850
7.0 ≤ pH < 7.2	280	560	340	670	360	720	380	760	390	790	410	820	430	850	450	900	460	920
7.2 ≤ pH < 7.4	370	740	430	850	440	890	450	900	470	940	480	970	490	990	510	1,000	520	1,000
7.4 ≤ pH < 7.6	480	970	540	1,100	550	1,100	560	1,100	560	1,100	570	1,100	580	1,200	580	1,200	590	1,200
7.6 ≤ pH < 7.8	610	1,200	690	1,400	700	1,400	700	1,400	700	1,400	700	1,400	690	1,400	690	1,400	680	1,400
7.8 ≤ pH < 8.0	750	1,500	820	1,600	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	820	1,600	810	1,600
8.0 ≤ pH < 8.5	820	1,600	1,000	2,000	1,100	2,200	1,100	2,300	1,100	2,300	1,100	2,300	1,100	2,300	1,100	2,300	1,100	2,100
pH > 8.5	440	890	400	800	380	770	370	740	360	720	340	690	330	670	320	650	320	640

Table 4C. Effluent Limitations for Aluminum, 2 mg/L ≤ DOC < 3 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	170	340	240	480	280	560	300	610	330	660	360	720	390	790	430	850	450	900
6.6 ≤ pH < 6.7	200	390	260	530	290	590	320	640	340	690	370	740	410	820	440	890	460	920
6.7 ≤ pH < 6.8	220	440	280	560	310	620	340	670	360	720	380	770	430	850	460	920	470	950
6.8 ≤ pH < 6.9	250	490	310	620	340	670	360	720	380	770	410	820	440	890	470	950	490	990
6.9 ≤ pH < 7.0	280	560	340	670	370	740	380	770	410	820	430	870	470	940	490	990	510	1,000
7.0 ≤ pH < 7.2	330	660	380	770	410	820	430	850	450	900	470	950	500	1,000	520	1,100	530	1,100
7.2 ≤ pH < 7.4	430	850	470	940	490	990	500	1,000	520	1,030	530	1,070	560	1,120	570	1,100	580	1,200
7.4 ≤ pH < 7.6	550	1,100	580	1,200	590	1,200	600	1,200	600	1,200	610	1,200	620	1,200	640	1,300	640	1,300
7.6 ≤ pH < 7.8	700	1,400	720	1,400	720	1,400	720	1,400	710	1,400	710	1,400	700	1,400	710	1,400	710	1,400
7.8 ≤ pH < 8.0	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	800	1,600	790	1,600
8.0 ≤ pH < 8.5	1,100	2,200	1,230	2,500	1,200	2,500	1,200	2,500	1,200	2,500	1,100	2,300	1,100	2,300	1,100	2,100	1,100	2,100
pH > 8.5	600	1,200	550	1,100	500	1,000	500	1,000	480	970	470	940	450	910	440	880	430	870

Table 4D. Effluent Limitations for Aluminum, 3 mg/L ≤ DOC < 4 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	200	410	280	560	320	640	350	710	380	770	420	840	460	920	510	1,000	520	1,100
6.6 ≤ pH < 6.7	230	460	300	610	340	670	370	740	390	790	430	850	470	950	520	1,000	530	1,100
6.7 ≤ pH < 6.8	250	510	320	640	360	720	380	770	410	820	440	890	480	970	520	1,100	540	1,100
6.8 ≤ pH < 6.9	280	560	340	690	380	770	400	800	430	870	470	940	500	1,000	540	1,100	560	1,100
6.9 ≤ pH < 7.0	310	620	380	760	410	820	430	850	460	920	480	970	520	1,100	550	1,100	560	1,100
7.0 ≤ pH < 7.2	370	740	430	850	450	900	470	940	490	990	520	1,100	550	1,100	580	1,200	590	1,200
7.2 ≤ pH < 7.4	460	920	500	1,000	520	1,100	530	1,100	560	1,120	580	1,200	600	1,200	620	1,200	620	1,200
7.4 ≤ pH < 7.6	580	1,200	610	1,200	610	1,200	620	1,200	630	1,300	650	1,300	660	1,300	670	1,300	670	1,300
7.6 ≤ pH < 7.8	740	1,500	740	1,500	740	1,500	730	1,500	730	1,500	730	1,500	740	1,500	740	1,500	740	1,500
7.8 ≤ pH < 8.0	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	810	1,600	810	1,600
8.0 ≤ pH < 8.5	1,300	2,600	1,300	2,600	1,200	2,500	1,200	2,500	1,100	2,300	1,100	2,300	1,100	2,100	1,000	2,000	1,000	2,000
pH > 8.5	750	1,500	650	1,300	650	1,300	600	1,200	600	1,200	590	1,180	550	1,100	550	1,100	550	1,100

Table 4E. Effluent Limitations for Aluminum, 4 mg/L ≤ DOC < 6 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	250	490	340	670	380	760	410	820	450	900	490	990	540	1,100	600	1,200	620	1,200
6.6 ≤ pH < 6.7	270	540	350	710	390	790	430	850	460	920	500	1,000	550	1,100	610	1,200	620	1,200
6.7 ≤ pH < 6.8	290	590	370	740	410	820	440	890	470	950	520	1,000	560	1,100	610	1,200	620	1,200
6.8 ≤ pH < 6.9	320	640	390	790	430	870	460	920	500	1,000	530	1,100	570	1,100	610	1,200	630	1,300
6.9 ≤ pH < 7.0	350	710	420	840	450	900	480	970	520	1,000	550	1,100	590	1,200	620	1,200	640	1,300
7.0 ≤ pH < 7.2	400	800	470	940	490	990	520	1,100	550	1,100	580	1,200	610	1,200	640	1,300	650	1,300
7.2 ≤ pH < 7.4	490	990	540	1,100	560	1,100	580	1,200	610	1,200	620	1,200	650	1,300	660	1,300	670	1,300
7.4 ≤ pH < 7.6	610	1,200	630	1,300	640	1,300	660	1,300	670	1,300	680	1,400	700	1,400	700	1,400	710	1,400
7.6 ≤ pH < 7.8	760	1,500	750	1,500	750	1,500	750	1,500	750	1,500	750	1,500	750	1,500	750	1,500	750	1,500
7.8 ≤ pH < 8.0	980	2,000	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	820	1,600	820	1,600
8.0 ≤ pH < 8.5	1,400	2,800	1,300	2,600	1,200	2,500	1,100	2,300	1,100	2,300	1,100	2,100	1,000	2,000	1,000	2,000	1,000	2,000
pH > 8.5	900	1,800	820	1,600	800	1,600	750	1,500	750	1,500	700	1,400	700	1,400	650	1,300	650	1,300

Table 4F. Effluent Limitations for Aluminum, 6 mg/L ≤ DOC < 8 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	290	570	390	790	440	890	480	970	520	1,100	570	1,100	640	1,300	700	1,400	730	1,500
6.6 ≤ pH < 6.7	310	620	410	820	460	920	490	990	530	1,100	580	1,200	640	1,300	700	1,400	720	1,400
6.7 ≤ pH < 6.8	340	670	430	850	470	940	500	1,000	550	1,100	600	1,200	650	1,300	700	1,400	710	1,400
6.8 ≤ pH < 6.9	360	720	440	890	480	970	520	1,100	560	1,100	610	1,200	650	1,300	700	1,400	710	1,400
6.9 ≤ pH < 7.0	390	790	470	940	510	1,000	540	1,100	580	1,200	610	1,200	660	1,300	700	1,400	710	1,400
7.0 ≤ pH < 7.2	440	890	510	1,000	550	1,100	570	1,100	610	1,200	640	1,300	670	1,300	700	1,400	710	1,400
7.2 ≤ pH < 7.4	520	1,100	570	1,100	610	1,200	630	1,300	660	1,300	670	1,300	700	1,400	710	1,400	720	1,400
7.4 ≤ pH < 7.6	640	1,300	660	1,300	680	1,400	700	1,400	700	1,400	720	1,400	730	1,500	740	1,500	740	1,500
7.6 ≤ pH < 7.8	780	1,600	760	1,500	770	1,500	770	1,500	780	1,600	780	1,600	780	1,600	770	1,500	770	1,500
7.8 ≤ pH < 8.0	980	2,000	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	820	1,600
8.0 ≤ pH < 8.5	1,500	3,000	1,200	2,500	1,100	2,300	1,100	2,300	1,100	2,100	1,000	2,000	1,000	2,000	900	1,800	900	1,800
pH > 8.5	1,100	2,200	1,000	2,000	950	1,900	950	1,900	900	1,800	850	1,700	850	1,700	800	1,600	800	1,600

Table 4G. Effluent Limitations for Aluminum, 8 mg/L ≤ DOC < 10 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	330	660	430	870	500	1,000	540	1,100	590	1,200	650	1,300	720	1,400	790	1,600	820	1,600
6.6 ≤ pH < 6.7	340	690	450	900	510	1,000	550	1,100	600	1,200	660	1,300	710	1,400	780	1,600	800	1,600
6.7 ≤ pH < 6.8	370	740	470	940	520	1,000	560	1,100	610	1,200	660	1,300	710	1,400	770	1,500	790	1,600
6.8 ≤ pH < 6.9	390	790	480	970	530	1,100	570	1,100	620	1,200	660	1,300	710	1,400	760	1,500	780	1,600
6.9 ≤ pH < 7.0	430	850	510	1,000	560	1,100	590	1,200	630	1,300	670	1,300	710	1,400	750	1,500	770	1,500
7.0 ≤ pH < 7.2	470	950	540	1,100	590	1,200	620	1,200	660	1,300	680	1,400	710	1,400	750	1,500	760	1,500
7.2 ≤ pH < 7.4	550	1,100	610	1,200	640	1,300	660	1,300	690	1,400	700	1,400	730	1,500	750	1,500	760	1,500
7.4 ≤ pH < 7.6	660	1,300	690	1,400	700	1,400	720	1,400	730	1,500	750	1,500	750	1,500	760	1,500	770	1,500
7.6 ≤ pH < 7.8	790	1,600	780	1,600	790	1,600	790	1,600	790	1,600	790	1,600	790	1,600	790	1,600	780	1,600
7.8 ≤ pH < 8.0	980	2,000	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	810	1,600
8.0 ≤ pH < 8.5	1,400	2,800	1,200	2,500	1,100	2,300	1,100	2,100	1,100	2,100	1,000	2,000	1,000	2,000	900	1,800	900	1,800
pH > 8.5	1,300	2,600	1,100	2,300	1,100	2,200	1,100	2,200	1,000	2,100	1,000	2,000	980	1,970	950	1,900	950	1,900

Table 4H. Effluent Limitations for Aluminum, 10 mg/L ≤ DOC < 12 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	360	720	480	970	550	1,100	600	1,200	650	1,300	710	1,400	790	1,600	900	1,800	900	1,800
6.6 ≤ pH < 6.7	380	760	490	990	550	1,100	600	1,200	660	1,300	710	1,400	790	1,600	820	1,600	900	1,800
6.7 ≤ pH < 6.8	400	800	510	1,000	560	1,100	610	1,200	660	1,300	710	1,400	770	1,500	820	1,600	820	1,600
6.8 ≤ pH < 6.9	430	850	520	1,100	570	1,100	620	1,200	670	1,300	710	1,400	770	1,500	820	1,600	820	1,600
6.9 ≤ pH < 7.0	450	900	540	1,100	600	1,200	630	1,300	670	1,300	710	1,400	760	1,500	800	1,600	820	1,600
7.0 ≤ pH < 7.2	500	1,000	570	1,100	620	1,200	660	1,300	690	1,400	720	1,400	750	1,500	790	1,600	800	1,600
7.2 ≤ pH < 7.4	570	1,100	640	1,300	670	1,300	700	1,400	710	1,400	740	1,500	750	1,500	790	1,600	800	1,600
7.4 ≤ pH < 7.6	670	1,300	710	1,400	730	1,500	750	1,500	750	1,500	760	1,500	770	1,500	790	1,600	810	1,600
7.6 ≤ pH < 7.8	790	1,600	800	1,600	800	1,600	800	1,600	800	1,600	800	1,600	790	1,600	800	1,600	810	1,600
7.8 ≤ pH < 8.0	980	2,000	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	820	1,600
8.0 ≤ pH < 8.5	1,400	2,800	1,100	2,300	1,100	2,100	1,100	2,100	1,000	2,000	1,000	2,000	900	1,800	900	1,800	900	1,800
pH > 8.5	1,400	2,900	1,300	2,600	1,200	2,500	1,200	2,400	1,200	2,400	1,100	2,300	1,100	2,200	1,000	2,100	1,000	2,100

Table 4I. Effluent Limitations for Aluminum, DOC > 12 mg/L

pH	0 ≤ H < 25 AMEL	0 ≤ H < 25 MDEL	25 ≤ H < 50 AMEL	25 ≤ H < 50 MDEL	50 ≤ H < 75 AMEL	50 ≤ H < 75 MDEL	75 ≤ H < 100 AMEL	75 ≤ H < 100 MDEL	100 ≤ H < 150 AMEL	100 ≤ H < 150 MDEL	150 ≤ H < 200 AMEL	150 ≤ H < 200 MDEL	200 ≤ H < 300 AMEL	200 ≤ H < 300 MDEL	300 ≤ H < 400 AMEL	300 ≤ H < 400 MDEL	H > 400 AMEL	H > 400 MDEL
6.5 ≤ pH < 6.6	370	740	500	1,000	570	1,100	620	1,200	680	1,400	750	1,500	820	1,600	900	1,800	900	1,800
6.6 ≤ pH < 6.7	390	790	510	1,020	570	1,100	620	1,200	680	1,400	750	1,500	810	1,600	900	1,800	900	1,800
6.7 ≤ pH < 6.8	420	840	520	1,100	580	1,200	630	1,300	690	1,400	740	1,500	800	1,600	900	1,800	900	1,800
6.8 ≤ pH < 6.9	440	890	540	1,100	600	1,200	640	1,300	690	1,400	740	1,500	790	1,600	820	1,600	900	1,800
6.9 ≤ pH < 7.0	470	940	560	1,100	610	1,200	660	1,300	700	1,400	740	1,500	790	1,600	820	1,600	820	1,600
7.0 ≤ pH < 7.2	510	1,020	590	1,200	640	1,300	670	1,300	700	1,400	740	1,500	770	1,500	800	1,600	820	1,600
7.2 ≤ pH < 7.4	580	1,200	650	1,300	690	1,400	700	1,400	730	1,500	750	1,500	770	1,500	810	1,600	820	1,600
7.4 ≤ pH < 7.6	680	1,400	720	1,400	740	1,500	750	1,500	760	1,500	770	1,500	780	1,600	810	1,600	820	1,600
7.6 ≤ pH < 7.8	800	1,600	800	1,600	810	1,600	810	1,600	800	1,600	800	1,600	800	1,600	820	1,600	820	1,600
7.8 ≤ pH < 8.0	980	2,000	900	1,800	900	1,800	900	1,800	900	1,800	820	1,600	820	1,600	820	1,600	820	1,600
8.0 ≤ pH < 8.5	1,400	2,800	1,100	2,300	1,100	2,100	1,100	2,100	1,000	2,000	1,000	2,000	900	1,800	900	1,800	900	1,800
pH > 8.5	1,500	3,100	1,400	2,800	1,300	2,700	1,300	2,600	1,200	2,500	1,200	2,400	1,150	2,300	1,100	2,200	1,100	2,200

f. Effluent Limitations for Priority Pollutants. The priority pollutants, subject to effluent limitations as identified in the NOA from the Executive Officer, shall not exceed the effluent limitations in Table 5A for discharges to receiving waters with MUN and Table 5B for discharges to receiving waters without MUN below. Effluent limitations for chromium (VI) and total copper vary according to the Coefficient of Variation (CV) of the effluent data. The CV is a measure of the data variability and is calculated as the standard deviation divided by the arithmetic mean of the observed values.

Table 5A. Effluent Limitations for Priority Pollutants with MUN

CTR Number	Parameter	Units	AMEL	MDEL
1	Antimony, Total	µg/L	6	12
2	Arsenic, Total	µg/L	10	20
3	Beryllium, Total	µg/L	4	8
4	Cadmium, Total	µg/L	See Table 6A	See Table 6A
5a	Chromium (III)	µg/L	See Table 6B	See Table 6B
5b	Chromium (VI)	µg/L	See Table 5C	See Table 5C
6	Copper, Total	µg/L	See Table 6C-A - 6C-F	See Table 6C-A - 6C-F
7	Lead, Total	µg/L	See Table 6D	See Table 6D
8	Mercury, Total (See Table Note 3)	µg/L	0.05	0.10
9	Nickel, Total	µg/L	See Table 6E	See Table 6E
10	Selenium, Total	µg/L	4.1	8.2
11	Silver, Total	µg/L	See Table 6F	See Table 6F
12	Thallium, Total	µg/L	1.7	3.4
13	Zinc, Total	µg/L	See Table 6G	See Table 6G
14	Cyanide, Total (as CN)	µg/L	4.3	8.5
15	Asbestos	MFL	7	14
16	2,3,7,8-TCDD	µg/L	1.3E-08	2.6E-08
17	Acrolein	µg/L	320	642
18	Acrylonitrile	µg/L	0.059	0.118
19	Benzene	µg/L	1	2
20	Bromoform	µg/L	4.3	8.6
21	Carbon Tetrachloride	µg/L	0.25	0.50
22	Chlorobenzene	µg/L	70	140
23	Chlorodibromomethane	µg/L	0.401	0.804
24	Chloroethane	µg/L	--	--
25	2-Chloroethylvinyl Ether	µg/L	--	--
26	Chloroform	µg/L	60	120
27	Dichlorobromomethane	µg/L	0.56	1.12
28	1,1-Dichloroethane	µg/L	5	10
29	1,2-Dichloroethane	µg/L	0.38	0.76
30	1,1-Dichloroethylene	µg/L	0.057	0.114

CTR Number	Parameter	Units	AMEL	MDEL
31	1,2-Dichloropropane	µg/L	0.52	1.04
32	1,3-Dichloropropylene	µg/L	0.5	1.0
33	Ethylbenzene	µg/L	300	602
34	Methyl Bromide	µg/L	48	96
35	Methyl Chloride	µg/L	--	--
36	Methylene Chloride	µg/L	4.7	9.4
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	0.34
38	Tetrachloroethylene	µg/L	0.8	1.6
39	Toluene	µg/L	150	301
40	1,2-Trans-Dichloroethylene	µg/L	10	20
41	1,1,1-Trichloroethane	µg/L	200	401
42	1,1,2-Trichloroethane	µg/L	0.60	1.20
43	Trichloroethylene	µg/L	2.7	5.4
44	Vinyl Chloride	µg/L	0.5	1.0
45	2-Chlorophenol	µg/L	120	241
46	2,4-Dichlorophenol	µg/L	93	187
47	2,4-Dimethylphenol	µg/L	540	1,083
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	26.9
49	2,4-Dinitrophenol	µg/L	70	140
50	2-Nitrophenol	µg/L	--	--
51	4-Nitrophenol	µg/L	--	--
52	3-Methyl-4-Chlorophenol	µg/L	--	--
53	Pentachlorophenol	µg/L	0.28	0.56
54	Phenol	µg/L	21000	42130
55	2,4,6-Trichlorophenol	µg/L	2.1	4.2
56	Acenaphthene	µg/L	1200	2407
57	Acenaphthylene	µg/L	--	--
58	Anthracene	µg/L	9,600	19,259
59	Benzidine	µg/L	0.00012	0.00024
60	Benzo(a)Anthracene	µg/L	0.0044	0.0088
61	Benzo(a)Pyrene	µg/L	0.0044	0.0088
62	Benzo(b)Fluoranthene	µg/L	0.0044	0.0088
63	Benzo(ghi)Perylene	µg/L	--	--
64	Benzo(k)Fluoranthene	µg/L	0.0044	0.0088
65	Bis(2-Chloroethoxy)Methane	µg/L	--	--
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	0.062
67	Bis(2-Chloroisopropyl)Ether	µg/L	1400	2809
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	3.6
69	4-Bromphenyl Phenyl Ether	µg/L	--	--
70	Butylbenzyl Phthalate	µg/L	3000	6019
71	2-Chloronaphthalene	µg/L	1700	3411
72	4-Chlorophenyl Phenyl Ether	µg/L	--	--

CTR Number	Parameter	Units	AMEL	MDEL
73	Chrysene	µg/L	0.0044	0.0088
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	0.0088
75	1,2-Dichlorobenzene	µg/L	600	1,204
76	1,3-Dichlorobenzene	µg/L	400	802
77	1,4-Dichlorobenzene	µg/L	5	10
78	3,3 Dichlorobenzidine	µg/L	0.04	0.08
79	Diethyl Phthalate	µg/L	23000	46142
80	Dimethyl Phthalate	µg/L	313000	627937
81	Di-n-Butyl Phthalate	µg/L	2700	5417
82	2,4-Dinitrotoluene	µg/L	0.11	0.22
83	2,6-Dinitrotoluene	µg/L	--	--
84	Di-n-Octyl Phthalate	µg/L	--	--
85	1,2-Diphenylhydrazine	µg/L	0.040	0.080
86	Fluoranthene	µg/L	300	602
87	Fluorene	µg/L	1300	2608
88	Hexachlorobenzene	µg/L	0.00075	0.00150
89	Hexachlorobutadiene	µg/L	0.44	0.88
90	Hexachlorocyclopentadiene	µg/L	50	100
91	Hexachloroethane	µg/L	1.9	3.8
92	Indeno(1,2,3-cd)Pyrene	µg/L	0.0044	0.0088
93	Isophorone	µg/L	8.4	16.9
94	Naphthalene	µg/L	--	--
95	Nitrobenzene	µg/L	17	34
96	N-Nitrosodimethylamine	µg/L	0.00069	0.00138
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	0.010
98	N-Nitrosodiphenylamine	µg/L	5.0	10.0
99	Phenanthrene	µg/L	--	--
100	Pyrene	µg/L	960	1926
101	1,2,4-Trichlorobenzene	µg/L	5	10
102	Aldrin	µg/L	Non-detect (ND)	ND
103	alpha-BHC	µg/L	ND	ND
104	beta-BHC	µg/L	ND	ND
105	gamma-BHC (Lindane)	µg/L	ND	ND
106	delta-BHC	µg/L	ND	ND
107	Chlordane	µg/L	ND	ND
108	4,4'-DDT	µg/L	ND	ND
109	4,4'-DDE (linked to DDT)	µg/L	ND	ND
110	4,4'-DDD	µg/L	ND	ND
111	Dieldrin	µg/L	ND	ND
112	alpha-Endosulfan	µg/L	ND	ND
113	beta-Endolsulfan	µg/L	ND	ND

CTR Number	Parameter	Units	AMEL	MDEL
114	Endosulfan Sulfate	µg/L	ND	ND
115	Endrin	µg/L	ND	ND
116	Endrin Aldehyde	µg/L	ND	ND
117	Heptachlor	µg/L	ND	ND
118	Heptachlor Epoxide	µg/L	ND	ND
119-125	Polychlorinated Biphenyls (PCBs) sum	µg/L	ND	ND
126	Toxaphene	µg/L	ND	ND

Table 5A Notes:

1. The sum of PCBs applies to PCB aroclors, 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

2. The non-detectable (ND) limitation applies to each individual pesticide (CTR number 102 through 126). No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L (SIP minimum level).

3. **Mercury, Total.** For discharges to receiving waters with the beneficial uses of commercial and sport fishing (COMM), tribal tradition and culture (CUL), wildlife habitat (WILD), or marine habitat (MAR), an annual average effluent limitation of 12 ng/L for flowing water bodies (e.g., rivers, creeks, streams, and waters with tidal mixing) or 4 ng/L of total mercury for slow-moving water bodies (e.g., lagoons, closed estuaries, and marshes) is applicable in lieu of effluent limitations for total mercury in Table 5A.

Table 5B. Effluent Limitations for Priority Pollutants without MUN

CTR Number	Parameter	Units	AMEL	MDEL
1	Antimony, Total	µg/L	4300	8600
2	Arsenic, Total	µg/L	120	250
3	Beryllium, Total	µg/L	--	--
4	Cadmium, Total	µg/L	See Table 6A	See Table 6A
5a	Chromium (III)	µg/L	See Table 6B	See Table 6B
5b	Chromium (VI)	µg/L	See Table 5C	See Table 5C
6	Copper, Total	µg/L	See Table 6C-A- 6C-F	See Table 6C-A - 6C-F
7	Lead, Total	µg/L	See Table 6D	See Table 6D
8	Mercury, Total (See Table Note 4)	µg/L	0.05	0.10
9	Nickel, Total	µg/L	See Table 6E	See Table 6E
10	Selenium, Total	µg/L	4.1	8.2
11	Silver, Total	µg/L	See Table 6F	See Table 6F
12	Thallium, Total	µg/L	6.3	13
13	Zinc, Total	µg/L	See Table 6G	See Table 6G

CTR Number	Parameter	Units	AMEL	MDEL
14	Cyanide, Total (as CN)	µg/L	4.3	8.5
15	Asbestos	MFL	--	--
16	2,3,7,8-TCDD	µg/L	--	--
17	Acrolein	µg/L	--	--
18	Acrylonitrile	µg/L	0.118	0.237
19	Benzene	µg/L	71	142
20	Bromoform	µg/L	360	720
21	Carbon Tetrachloride	µg/L	4.4	8.8
22	Chlorobenzene	µg/L	--	--
23	Chlorodibromomethane	µg/L	34	68
24	Chloroethane	µg/L	--	--
25	2-Chloroethylvinyl Ether	µg/L	--	--
26	Chloroform	µg/L	1000	2000
27	Dichlorobromomethane	µg/L	46	943
28	1,1-Dichloroethane	µg/L	--	--
29	1,2-Dichloroethane	µg/L	--	--
30	1,1-Dichloroethylene	µg/L	--	--
31	1,2-Dichloropropane	µg/L	--	--
32	1,3-Dichloropropylene	µg/L	--	--
33	Ethylbenzene	µg/L	--	--
34	Methyl Bromide	µg/L	--	--
35	Methyl Chloride	µg/L	--	--
36	Methylene Chloride	µg/L	--	--
37	1,1,2,2-Tetrachloroethane	µg/L	--	--
38	Tetrachloroethylene	µg/L	--	--
39	Toluene	µg/L	--	--
40	1,2-Trans-Dichloroethylene	µg/L	--	--
41	1,1,1-Trichloroethane	µg/L	--	--
42	1,1,2-Trichloroethane	µg/L	--	--
43	Trichloroethylene	µg/L	--	--
44	Vinyl Chloride	µg/L	--	--
45	2-Chlorophenol	µg/L	--	--
46	2,4-Dichlorophenol	µg/L	--	--
47	2,4-Dimethylphenol	µg/L	2300	4600
48	2-Methyl-4,6-Dinitrophenol	µg/L	115	230
49	2,4-Dinitrophenol	µg/L	115	230
50	2-Nitrophenol	µg/L	--	--
51	4-Nitrophenol	µg/L	--	--
52	3-Methyl-4-Chlorophenol	µg/L	--	--
53	Pentachlorophenol	µg/L	8.2	16.4
54	Phenol	µg/L	--	--
55	2,4,6-Trichlorophenol	µg/L	6.5	13

CTR Number	Parameter	Units	AMEL	MDEL
56	Acenaphthene	µg/L	--	--
57	Acenaphthylene	µg/L	--	--
58	Anthracene	µg/L	110000	220000
59	Benzidine	µg/L	0.00054	0.0011
60	Benzo(a)Anthracene	µg/L	0.049	0.098
61	Benzo(a)Pyrene	µg/L	0.049	0.098
62	Benzo(b)Fluoranthene	µg/L	0.049	0.098
63	Benzo(ghi)Perylene	µg/L	--	--
64	Benzo(k)Fluoranthene	µg/L	0.049	0.098
65	Bis(2-Chloroethoxy)Methane	µg/L	--	--
66	Bis(2-Chloroethyl)Ether	µg/L	1.4	2.8
67	Bis(2-Chloroisopropyl)Ether	µg/L	170000	340000
68	Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	11.8
69	4-Bromphenyl Phenyl Ether	µg/L	--	--
70	Butylbenzyl Phthalate	µg/L	5200	10400
71	2-Chloronaphthalene	µg/L	4300	8600
72	4-Chlorophenyl Phenyl Ether	µg/L	--	--
73	Chrysene	µg/L	0.049	0.098
74	Dibenzo(a,h)Anthracene	µg/L	0.049	0.098
75	1,2-Dichlorobenzene	µg/L	--	--
76	1,3-Dichlorobenzene	µg/L	--	--
77	1,4-Dichlorobenzene	µg/L	--	2600
78	3,3 Dichlorobenzidine	µg/L	0.077	0.154
79	Diethyl Phthalate	µg/L	120000	240000
80	Dimethyl Phthalate	µg/L	2900000	5800000
81	Di-n-Butyl Phthalate	µg/L	12000	24000
82	2,4-Dinitrotoluene	µg/L	9.1	18.2
83	2,6-Dinitrotoluene	µg/L	--	--
84	Di-n-Octyl Phthalate	µg/L	--	--
85	1,2-Diphenylhydrazine	µg/L	0.54	1.08
86	Fluoranthene	µg/L	370	742
87	Fluorene	µg/L	14000	28000
88	Hexachlorobenzene	µg/L	0.00077	0.0015
89	Hexachlorobutadiene	µg/L	--	50
90	Hexachlorocyclopentadiene	µg/L	--	--
91	Hexachloroethane	µg/L	8.9	17.8
92	Indeno(1,2,3-cd)Pyrene	µg/L	0.049	0.098
93	Isophorone	µg/L	600	1200
94	Naphthalene	µg/L	--	--
95	Nitrobenzene	µg/L	1900	3800
96	N-Nitrosodimethylamine	µg/L	8.1	16.2
97	N-Nitrosodi-n-Propylamine	µg/L	1.4	2.8

CTR Number	Parameter	Units	AMEL	MDEL
98	N-Nitrosodiphenylamine	µg/L	16	32
99	Phenanthrene	µg/L	--	--
100	Pyrene	µg/L	11000	22000
101	1,2,4-Trichlorobenzene	µg/L	--	--
102	Aldrin	µg/L	ND	ND
103	alpha-BHC	µg/L	ND	ND
104	beta-BHC	µg/L	ND	ND
105	gamma-BHC (Lindane)	µg/L	ND	ND
106	delta-BHC	µg/L	ND	ND
107	Chlordane	µg/L	ND	ND
108	4,4'-DDT	µg/L	ND	ND
109	4,4'-DDE (linked to DDT)	µg/L	ND	ND
110	4,4'-DDD	µg/L	ND	ND
111	Dieldrin	µg/L	ND	ND
112	alpha-Endosulfan	µg/L	ND	ND
113	beta-Endolsulfan	µg/L	ND	ND
114	Endosulfan Sulfate	µg/L	ND	ND
115	Endrin	µg/L	ND	ND
116	Endrin Aldehyde	µg/L	ND	ND
117	Heptachlor	µg/L	ND	ND
118	Heptachlor Epoxide	µg/L	ND	ND
119-125	PCBs sum	µg/L	ND	ND
126	Toxaphene	µg/L	ND	ND

Table 5B Notes:

1. The effluent limitation for 1,4-dichlorobenzene and hexachlorobutadiene are based on the CTR Human Health Criterion (fish consumption only).

2. The sum of PCBs applies to PCB aroclors, 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

3. The non-detectable (ND) limitation applies to each individual pesticide (CTR number 102 through 126). No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L (SIP minimum level).

4. **Mercury, Total.** For discharges to receiving waters with the beneficial uses of commercial and sport fishing (COMM), tribal tradition and culture (CUL), wildlife habitat (WILD), or marine habitat (MAR), an annual average effluent limitation of 12 ng/L for flowing water bodies (e.g., rivers, creeks, streams, and waters with tidal mixing) or 4 ng/L of total mercury for slow-moving water bodies (e.g, lagoons, closed estuaries, and marshes) is applicable in lieu of effluent limitations for total mercury in Table 5B.

Table 5C. Chromium (VI) Effluent Limitations in µg/L

CV	Chromium (VI), AMEL	Chromium (VI) MDEL
0.1	11	12
0.2	10	14
0.3	10	15
0.4	9.6	16
0.5	8.7	16
0.6	8.0	16
0.7	7.4	16
0.8	7.0	16
0.9	6.6	16
1.0	6.3	16
1.1	6.1	16
1.2	5.9	16
1.3	5.8	16
1.4	5.6	16
1.5	5.5	16
1.6	5.5	16
1.7	5.4	16
1.8	5.3	16
1.9	5.3	16
2.0	5.2	16
2.1	5.2	16
2.2	5.1	16
2.3	5.1	16
2.4	5.1	16
2.5	5.0	16
2.6	5.0	16
2.7	5.0	16
2.8	5.0	16
2.9	4.9	16
3.0	4.9	16
3.1	4.9	16
3.2	4.9	16
3.3	4.9	16
3.4	4.8	16
3.5	4.8	16
3.6	4.8	16
3.7	4.8	16
3.8	4.7	16
3.9	4.7	16

CV	Chromium (VI), AMEL	Chromium (VI) MDEL
4.0	4.6	16

g. Effluent Limitations for Hardness-Dependent Metals. The priority pollutants, subject to effluent limitations as identified in the NOA from the Executive Officer, shall not exceed the respective effluent limitations contained in Tables 6A through 6G, below for cadmium, chromium (III), copper, lead, nickel, silver, and zinc. In this General Order, effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and zinc are based aquatic-life criteria and a range of hardness concentrations, with the middle value selected. The CV is used to calculate the effluent limitations for the hardness-dependent metals. A range of CV values are included to calculate the effluent limitations for copper in Tables 6C-A through 6C-F. A CV of 0.6 will be used by the Central Valley Water Board to calculate effluent limitations for all other hardness-dependent metals. Effluent limitations specified in Tables 6A through 6G are applicable to both MUN and non-MUN beneficial uses unless otherwise noted.

Table 6A. Cadmium (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	0.080	0.15
5 ≤ H < 10	0.12	0.24
10 ≤ H < 15	0.22	0.43
15 ≤ H < 20	0.32	0.63
20 ≤ H < 25	0.42	0.84
25 ≤ H < 30	0.52	1.1
30 ≤ H < 35	0.63	1.3
35 ≤ H < 40	0.74	1.5
40 ≤ H < 45	0.86	1.7
45 ≤ H < 50	0.97	2.0
50 ≤ H < 55	1.1	2.2
55 ≤ H < 60	1.2	2.4
60 ≤ H < 65	1.3	2.7
65 ≤ H < 70	1.4	2.9
70 ≤ H < 75	1.6	3.1
75 ≤ H < 80	1.7	3.3
80 ≤ H < 90	1.8	3.6
90 ≤ H < 100	1.9	3.9
100 ≤ H < 110	2.1	4.2
110 ≤ H < 120	2.2	4.5
120 ≤ H < 130	2.4	4.8
130 ≤ H < 140	2.6	5.1
140 ≤ H < 150	2.7	5.4
150 ≤ H < 200	3.1	6.3
200 ≤ H < 250	3.8	7.6
250 ≤ H < 300	4.5	8.9
300 ≤ H < 350 (non-MUN only)	5.1	10
350 ≤ H < 400 (non-MUN only)	5.7	11
H ≥ 400 (non-MUN only)	6.0	12
H ≥ 300 (MUN only)	5	10

Table 6B. Chromium (III) (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	15	30
5 ≤ H < 10	20	41
10 ≤ H < 15	31	62
15 ≤ H < 20	41	82
20 ≤ H < 25	49	99
25 ≤ H < 30	57	110
30 ≤ H < 35	66	130
35 ≤ H < 40	74	150
40 ≤ H < 45	82	160
45 ≤ H < 50	90	180
50 ≤ H < 55	98	200
55 ≤ H < 60	110	210
60 ≤ H < 65	110	230
65 ≤ H < 70	120	250
70 ≤ H < 75	130	260
75 ≤ H < 80	140	280
80 ≤ H < 90	150	300
90 ≤ H < 100	160	330
100 ≤ H < 110	180	360
110 ≤ H < 120	190	380
120 ≤ H < 130	200	410
130 ≤ H < 140	210	430
140 ≤ H < 150	230	460
150 ≤ H < 200	270	540
200 ≤ H < 250	330	660
250 ≤ H < 300	380	770
300 ≤ H < 350	440	890
350 ≤ H < 400	500	1000
H ≥ 400	520	1100

Table 6C-A. Effluent Limitations – Copper, Total in µg/L

CV	0 ≤ H < 5 AMEL	0 ≤ H < 5 MDEL	5 ≤ H < 10 AMEL	5 ≤ H < 10 MDEL	10 ≤ H < 15 AMEL	10 ≤ H < 15 MDEL	15 ≤ H < 20 AMEL	15 ≤ H < 20 MDEL	20 ≤ H < 25 AMEL	20 ≤ H < 25 MDEL
0.1	0.37	0.43	0.99	1.1	1.5	1.8	2.0	2.4	2.5	2.9
0.2	0.33	0.43	0.92	1.2	1.5	2.0	2.0	2.6	2.4	3.2
0.3	0.29	0.43	0.81	1.2	1.3	2.0	1.8	2.7	2.3	3.4
0.4	0.26	0.43	0.73	1.2	1.2	2.0	1.6	2.7	2.0	3.4
0.5	0.23	0.43	0.66	1.2	1.1	2.0	1.5	2.7	1.9	3.4
0.6	0.22	0.43	0.61	1.2	0.98	2.0	1.4	2.7	1.7	3.4
0.7	0.20	0.43	0.57	1.2	0.92	2.0	1.3	2.7	1.6	3.4
0.8	0.19	0.43	0.53	1.2	0.86	2.0	1.2	2.7	1.5	3.4
0.9	0.18	0.43	0.51	1.2	0.82	2.0	1.1	2.7	1.4	3.4
1.0	0.17	0.43	0.48	1.2	0.78	2.0	1.1	2.7	1.4	3.4
1.1	0.17	0.43	0.47	1.2	0.75	2.0	1.0	2.7	1.3	3.4
1.2	0.16	0.43	0.45	1.2	0.73	2.0	1.0	2.7	1.3	3.4
1.3	0.16	0.43	0.44	1.2	0.71	2.0	0.98	2.7	1.2	3.4
1.4	0.15	0.43	0.43	1.2	0.70	2.0	0.96	2.7	1.2	3.4
1.5	0.15	0.43	0.42	1.2	0.68	2.0	0.94	2.7	1.2	3.4
1.6	0.15	0.43	0.42	1.2	0.67	2.0	0.92	2.7	1.2	3.4
1.7	0.15	0.43	0.41	1.2	0.66	2.0	0.91	2.7	1.2	3.4
1.8	0.14	0.43	0.40	1.2	0.65	2.0	0.90	2.7	1.1	3.4
1.9	0.14	0.43	0.40	1.2	0.65	2.0	0.89	2.7	1.1	3.4
2.0	0.14	0.43	0.40	1.2	0.64	2.0	0.88	2.7	1.1	3.4
2.1	0.14	0.43	0.39	1.2	0.64	2.0	0.87	2.7	1.1	3.4
2.2	0.14	0.43	0.39	1.2	0.63	2.0	0.87	2.7	1.1	3.4
2.3	0.14	0.43	0.39	1.2	0.63	2.0	0.86	2.7	1.1	3.4
2.4	0.14	0.43	0.39	1.2	0.62	2.0	0.86	2.7	1.1	3.4
2.5	0.14	0.43	0.38	1.2	0.62	2.0	0.85	2.7	1.1	3.4
2.6	0.14	0.43	0.38	1.2	0.62	2.0	0.85	2.7	1.1	3.4
2.7	0.13	0.43	0.38	1.2	0.61	2.0	0.84	2.7	1.1	3.4
2.8	0.13	0.43	0.38	1.2	0.61	2.0	0.84	2.7	1.1	3.4
2.9	0.13	0.43	0.38	1.2	0.61	2.0	0.83	2.7	1.1	3.4
3.0	0.13	0.43	0.37	1.2	0.61	2.0	0.83	2.7	1.1	3.4
3.1	0.13	0.43	0.37	1.2	0.60	2.0	0.83	2.7	1.0	3.4
3.2	0.13	0.43	0.37	1.2	0.60	2.0	0.82	2.7	1.0	3.4
3.3	0.13	0.43	0.37	1.2	0.60	2.0	0.82	2.7	1.0	3.4
3.4	0.13	0.43	0.37	1.2	0.60	2.0	0.82	2.7	1.0	3.4
3.5	0.13	0.43	0.37	1.2	0.59	2.0	0.82	2.7	1.0	3.4
3.6	0.13	0.43	0.37	1.2	0.59	2.0	0.81	2.7	1.0	3.4
3.7	0.13	0.43	0.36	1.2	0.59	2.0	0.81	2.7	1.0	3.4
3.8	0.13	0.43	0.36	1.2	0.59	2.0	0.81	2.7	1.0	3.4
3.9	0.13	0.43	0.36	1.2	0.59	2.0	0.81	2.7	1.0	3.4
4.0	0.13	0.43	0.36	1.2	0.58	2.0	0.80	2.7	1.0	3.4

Table 6C-B. Effluent Limitations – Copper, Total in µg/L

CV	25 ≤ H < 30 AMEL	25 ≤ H < 30 MDEL	30 ≤ H < 35 AMEL	30 ≤ H < 35 MDEL	35 ≤ H < 40 AMEL	35 ≤ H < 40 MDEL	40 ≤ H < 45 AMEL	40 ≤ H < 45 MDEL	45 ≤ H < 50 AMEL	45 ≤ H < 50 MDEL
0.1	3.0	3.5	3.5	4.0	3.9	4.5	4.3	5.0	4.8	5.5
0.2	2.9	3.8	3.3	4.4	3.8	5.0	4.2	5.6	4.6	6.1
0.3	2.8	4.1	3.2	4.8	3.6	5.5	4.1	6.1	4.5	6.7
0.4	2.5	4.1	2.9	4.9	3.3	5.6	3.7	6.3	4.1	6.9
0.5	2.2	4.1	2.6	4.9	3.0	5.6	3.4	6.3	3.8	6.9
0.6	2.1	4.1	2.4	4.9	2.8	5.6	3.1	6.3	3.5	6.9
0.7	1.9	4.1	2.3	4.9	2.6	5.6	2.9	6.3	3.2	6.9
0.8	1.8	4.1	2.1	4.9	2.4	5.6	2.7	6.3	3.0	6.9
0.9	1.7	4.1	2.0	4.9	2.3	5.6	2.6	6.3	2.9	6.9
1.0	1.6	4.1	1.9	4.9	2.2	5.6	2.5	6.3	2.8	6.9
1.1	1.6	4.1	1.9	4.9	2.1	5.6	2.4	6.3	2.7	6.9
1.2	1.5	4.1	1.8	4.9	2.1	5.6	2.3	6.3	2.6	6.9
1.3	1.5	4.1	1.8	4.9	2.0	5.6	2.3	6.3	2.5	6.9
1.4	1.5	4.1	1.7	4.9	2.0	5.6	2.2	6.3	2.5	6.9
1.5	1.4	4.1	1.7	4.9	1.9	5.6	2.2	6.3	2.4	6.9
1.6	1.4	4.1	1.7	4.9	1.9	5.6	2.1	6.3	2.4	6.9
1.7	1.4	4.1	1.6	4.9	1.9	5.6	2.1	6.3	2.3	6.9
1.8	1.4	4.1	1.6	4.9	1.8	5.6	2.1	6.3	2.3	6.9
1.9	1.4	4.1	1.6	4.9	1.8	5.6	2.1	6.3	2.3	6.9
2.0	1.3	4.1	1.6	4.9	1.8	5.6	2.0	6.3	2.3	6.9
2.1	1.3	4.1	1.6	4.9	1.8	5.6	2.0	6.3	2.2	6.9
2.2	1.3	4.1	1.6	4.9	1.8	5.6	2.0	6.3	2.2	6.9
2.3	1.3	4.1	1.5	4.9	1.8	5.6	2.0	6.3	2.2	6.9
2.4	1.3	4.1	1.5	4.9	1.8	5.6	2.0	6.3	2.2	6.9
2.5	1.3	4.1	1.5	4.9	1.7	5.6	2.0	6.3	2.2	6.9
2.6	1.3	4.1	1.5	4.9	1.7	5.6	2.0	6.3	2.2	6.9
2.7	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.2	6.9
2.8	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
2.9	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.0	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.1	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.2	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.3	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.4	1.3	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.5	1.2	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.6	1.2	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.7	1.2	4.1	1.5	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.8	1.2	4.1	1.4	4.9	1.7	5.6	1.9	6.3	2.1	6.9
3.9	1.2	4.1	1.4	4.9	1.7	5.6	1.9	6.3	2.1	6.9
4.0	1.2	4.1	1.4	4.9	1.6	5.6	1.9	6.3	2.1	6.9

Table 6C-C. Effluent Limitations – Copper, Total in µg/L

CV	50 ≤ H < 55 AMEL	50 ≤ H < 55 MDEL	55 ≤ H < 60 AMEL	55 ≤ H < 60 MDEL	60 ≤ H < 65 AMEL	60 ≤ H < 65 MDEL	65 ≤ H < 70 AMEL	65 ≤ H < 70 MDEL	70 ≤ H < 75 AMEL	70 ≤ H < 75 MDEL
0.1	5.2	6.0	5.6	6.5	6.0	7.0	6.4	7.5	6.9	7.9
0.2	5.0	6.7	5.4	7.2	5.8	7.7	6.2	8.3	6.6	8.8
0.3	4.9	7.3	5.3	7.9	5.6	8.5	6.0	9.0	6.4	9.6
0.4	4.6	7.6	5.0	8.3	5.4	9.0	5.8	9.7	6.2	10
0.5	4.1	7.6	4.5	8.3	4.9	9.0	5.2	9.7	5.6	10
0.6	3.8	7.6	4.1	8.3	4.5	9.0	4.8	9.7	5.2	10
0.7	3.5	7.6	3.9	8.3	4.2	9.0	4.5	9.7	4.8	10
0.8	3.3	7.6	3.6	8.3	3.9	9.0	4.2	9.7	4.5	10
0.9	3.2	7.6	3.4	8.3	3.7	9.0	4.0	9.7	4.3	10
1.0	3.0	7.6	3.3	8.3	3.6	9.0	3.8	9.7	4.1	10
1.1	2.9	7.6	3.2	8.3	3.4	9.0	3.7	9.7	4.0	10
1.2	2.8	7.6	3.1	8.3	3.3	9.0	3.6	9.7	3.8	10
1.3	2.8	7.6	3.0	8.3	3.2	9.0	3.5	9.7	3.7	10
1.4	2.7	7.6	2.9	8.3	3.2	9.0	3.4	9.7	3.7	10
1.5	2.6	7.6	2.9	8.3	3.1	9.0	3.3	9.7	3.6	10
1.6	2.6	7.6	2.8	8.3	3.1	9.0	3.3	9.7	3.5	10
1.7	2.6	7.6	2.8	8.3	3.0	9.0	3.2	9.7	3.5	10
1.8	2.5	7.6	2.8	8.3	3.0	9.0	3.2	9.7	3.4	10
1.9	2.5	7.6	2.7	8.3	3.0	9.0	3.2	9.7	3.4	10
2.0	2.5	7.6	2.7	8.3	2.9	9.0	3.1	9.7	3.4	10
2.1	2.5	7.6	2.7	8.3	2.9	9.0	3.1	9.7	3.3	10
2.2	2.4	7.6	2.7	8.3	2.9	9.0	3.1	9.7	3.3	10
2.3	2.4	7.6	2.6	8.3	2.9	9.0	3.1	9.7	3.3	10
2.4	2.4	7.6	2.6	8.3	2.8	9.0	3.1	9.7	3.3	10
2.5	2.4	7.6	2.6	8.3	2.8	9.0	3.0	9.7	3.2	10
2.6	2.4	7.6	2.6	8.3	2.8	9.0	3.0	9.7	3.2	10
2.7	2.4	7.6	2.6	8.3	2.8	9.0	3.0	9.7	3.2	10
2.8	2.4	7.6	2.6	8.3	2.8	9.0	3.0	9.7	3.2	10
2.9	2.3	7.6	2.6	8.3	2.8	9.0	3.0	9.7	3.2	10
3.0	2.3	7.6	2.5	8.3	2.8	9.0	3.0	9.7	3.2	10
3.1	2.3	7.6	2.5	8.3	2.7	9.0	3.0	9.7	3.2	10
3.2	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.3	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.4	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.5	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.6	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.7	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.7	3.1	10
3.8	2.3	7.6	2.5	8.3	2.7	9.0	2.9	9.6	3.1	10
3.9	2.3	7.6	2.5	8.3	2.7	9.0	2.8	9.6	3.0	10
4.0	2.3	7.6	2.5	8.3	2.6	8.9	2.8	9.5	3.0	10

Table 6C-D. Effluent Limitations – Copper, Total in µg/L

CV	75 ≤ H < 80 AMEL	75 ≤ H < 80 MDEL	80 ≤ H < 85 AMEL	80 ≤ H < 85 MDEL	85 ≤ H < 90 AMEL	85 ≤ H < 90 MDEL	90 ≤ H < 95 AMEL	90 ≤ H < 95 MDEL	95 ≤ H < 100 AMEL	95 ≤ H < 100 MDEL
0.1	7.3	8.4	7.7	8.9	8.0	9.3	8.4	9.8	8.8	10
0.2	7.0	9.3	7.4	9.8	7.8	10	8.2	11	8.5	11
0.3	6.8	10	7.2	11	7.5	11	7.9	12	8.2	12
0.4	6.4	11	6.7	11	7.1	12	7.5	13	7.8	13
0.5	5.8	11	6.1	11	6.4	12	6.8	13	7.1	13
0.6	5.3	11	5.6	11	5.9	12	6.2	13	6.5	13
0.7	4.9	11	5.2	11	5.5	12	5.8	13	6.1	13
0.8	4.6	11	4.9	11	5.2	12	5.5	13	5.7	13
0.9	4.4	11	4.7	11	4.9	12	5.2	13	5.4	13
1.0	4.2	11	4.5	11	4.7	12	5.0	13	5.2	13
1.1	4.1	11	4.3	11	4.5	12	4.8	13	5.0	13
1.2	3.9	11	4.2	11	4.4	12	4.6	13	4.9	13
1.3	3.8	11	4.1	11	4.3	12	4.5	13	4.7	13
1.4	3.8	11	4.0	11	4.2	12	4.4	13	4.6	13
1.5	3.7	11	3.9	11	4.1	12	4.3	13	4.5	13
1.6	3.6	11	3.8	11	4.1	12	4.3	13	4.5	13
1.7	3.6	11	3.8	11	4.0	12	4.2	13	4.4	13
1.8	3.5	11	3.7	11	3.9	12	4.1	13	4.4	13
1.9	3.5	11	3.7	11	3.9	12	4.1	13	4.3	13
2.0	3.5	11	3.7	11	3.9	12	4.1	13	4.3	13
2.1	3.4	11	3.6	11	3.8	12	4.0	13	4.2	13
2.2	3.4	11	3.6	11	3.8	12	4.0	13	4.2	13
2.3	3.4	11	3.6	11	3.8	12	4.0	13	4.2	13
2.4	3.4	11	3.6	11	3.8	12	3.9	13	4.1	13
2.5	3.3	11	3.5	11	3.7	12	3.9	13	4.1	13
2.6	3.3	11	3.5	11	3.7	12	3.9	13	4.1	13
2.7	3.3	11	3.5	11	3.7	12	3.9	13	4.1	13
2.8	3.3	11	3.5	11	3.7	12	3.9	13	4.1	13
2.9	3.3	11	3.5	11	3.7	12	3.9	13	4.0	13
3.0	3.3	11	3.5	11	3.6	12	3.8	13	4.0	13
3.1	3.3	11	3.4	11	3.6	12	3.8	13	4.0	13
3.2	3.2	11	3.4	11	3.6	12	3.8	13	4.0	13
3.3	3.2	11	3.4	11	3.6	12	3.8	13	4.0	13
3.4	3.2	11	3.4	11	3.6	12	3.8	13	4.0	13
3.5	3.2	11	3.4	11	3.6	12	3.8	13	3.9	13
3.6	3.2	11	3.4	11	3.6	12	3.8	13	3.9	13
3.7	3.2	11	3.4	11	3.6	12	3.7	13	3.9	13
3.8	3.2	11	3.4	11	3.5	12	3.7	13	3.9	13
3.9	3.2	11	3.4	11	3.5	12	3.7	13	3.9	13
4.0	3.2	11	3.3	11	3.5	12	3.7	12	3.8	13

Table 6C-E. Effluent Limitations – Copper, Total in µg/L

CV	100 ≤ H < 120 AMEL	100 ≤ H < 120 MDEL	120 ≤ H < 140 AMEL	120 ≤ H < 140 MDEL	140 ≤ H < 160 AMEL	140 ≤ H < 160 MDEL	160 ≤ H < 180 AMEL	160 ≤ H < 180 MDEL	180 ≤ H < 200 AMEL	180 ≤ H < 200 MDEL
0.1	9.8	11	11	13	13	15	14	16	16	18
0.2	9.5	13	11	14	12	16	14	18	15	20
0.3	9.1	14	11	16	12	18	13	20	15	22
0.4	8.8	15	10	17	12	19	13	21	14	24
0.5	8.3	15	9.7	18	11	21	12	23	14	25
0.6	7.6	15	8.9	18	10	21	12	23	13	26
0.7	7.1	15	8.3	18	9.5	21	11	23	12	26
0.8	6.7	15	7.8	18	9.0	21	10	23	11	26
0.9	6.3	15	7.4	18	8.5	21	9.6	23	11	26
1.0	6.1	15	7.1	18	8.1	21	9.2	23	10	26
1.1	5.9	15	6.9	18	7.8	21	8.8	23	9.8	26
1.2	5.7	15	6.6	18	7.6	21	8.6	23	9.5	26
1.3	5.5	15	6.5	18	7.4	21	8.3	23	9.3	26
1.4	5.4	15	6.3	18	7.2	21	8.1	23	9.0	26
1.5	5.3	15	6.2	18	7.1	21	8.0	23	8.9	26
1.6	5.2	15	6.1	18	7.0	21	7.9	23	8.7	26
1.7	5.1	15	6.0	18	6.9	21	7.8	23	8.6	26
1.8	5.1	15	5.9	18	6.8	21	7.7	23	8.5	26
1.9	5.0	15	5.9	18	6.7	21	7.6	23	8.4	26
2.0	5.0	15	5.8	18	6.7	21	7.5	23	8.3	26
2.1	4.9	15	5.8	18	6.6	21	7.4	23	8.3	26
2.2	4.9	15	5.7	18	6.6	21	7.4	23	8.2	26
2.3	4.9	15	5.7	18	6.5	21	7.3	23	8.1	26
2.4	4.8	15	5.7	18	6.5	21	7.3	23	8.1	26
2.5	4.8	15	5.6	18	6.4	21	7.2	23	8.1	26
2.6	4.8	15	5.6	18	6.4	21	7.2	23	8.0	26
2.7	4.8	15	5.6	18	6.4	21	7.2	23	8.0	26
2.8	4.7	15	5.5	18	6.3	21	7.1	23	7.9	26
2.9	4.7	15	5.5	18	6.3	21	7.1	23	7.8	25
3.0	4.7	15	5.5	18	6.3	21	7.0	23	7.7	25
3.1	4.7	15	5.5	18	6.2	20	6.9	23	7.6	25
3.2	4.7	15	5.4	18	6.1	20	6.8	22	7.5	25
3.3	4.6	15	5.3	18	6.0	20	6.7	22	7.4	24
3.4	4.6	15	5.3	17	6.0	20	6.6	22	7.3	24
3.5	4.5	15	5.2	17	5.9	20	6.6	22	7.2	24
3.6	4.5	15	5.1	17	5.8	19	6.5	22	7.1	24
3.7	4.4	15	5.1	17	5.8	19	6.4	21	7.0	24
3.8	4.4	15	5.0	17	5.7	19	6.3	21	7.0	23
3.9	4.3	15	5.0	17	5.6	19	6.3	21	6.9	23
4.0	4.3	14	4.9	17	5.6	19	6.2	21	6.8	23

Table 6C-F. Effluent Limitations – Copper, Total in µg/L

CV	200 ≤ H < 250 AMEL	200 ≤ H < 250 MDEL	250 ≤ H < 300 AMEL	250 ≤ H < 300 MDEL	300 ≤ H < 350 AMEL	300 ≤ H < 350 MDEL	350 ≤ H < 400 AMEL	350 ≤ H < 400 MDEL	H ≥ 400 AMEL	H ≥ 400 MDEL
0.1	18	21	21	25	25	29	28	32	29	34
0.2	17	23	21	27	24	32	27	36	28	38
0.3	17	25	20	30	23	35	26	39	28	41
0.4	16	27	19	32	22	37	25	42	27	45
0.5	16	29	19	35	22	40	24	45	26	48
0.6	15	30	18	36	21	42	24	47	25	50
0.7	14	30	17	36	20	43	23	49	24	52
0.8	13	30	16	36	19	43	21	49	23	52
0.9	12	30	15	36	18	43	20	49	21	52
1.0	12	30	14	36	17	43	19	49	21	52
1.1	11	30	14	36	16	43	19	49	20	52
1.2	11	30	13	36	16	43	18	49	19	52
1.3	11	30	13	36	15	43	18	49	19	52
1.4	11	30	13	36	15	43	17	49	18	52
1.5	10	30	13	36	15	43	17	49	18	52
1.6	10	30	12	36	14	43	17	49	18	52
1.7	10	30	12	36	14	43	16	49	17	52
1.8	10	30	12	36	14	43	16	49	17	52
1.9	10	30	12	36	14	43	16	49	17	52
2.0	10	30	12	36	14	43	16	49	17	52
2.1	10	30	12	36	14	43	16	49	17	52
2.2	10	30	12	36	14	43	16	49	17	52
2.3	10	30	12	36	14	43	15	49	16	51
2.4	10	30	11	36	13	42	15	48	16	51
2.5	9.4	30	11	36	13	42	15	47	16	50
2.6	9.4	30	11	36	13	42	15	47	15	50
2.7	9.3	30	11	36	13	41	14	46	15	49
2.8	9.2	30	11	35	13	41	14	46	15	48
2.9	9.0	29	11	35	12	40	14	45	15	48
3.0	8.9	29	11	34	12	40	14	45	15	47
3.1	8.8	29	10	34	12	39	14	44	14	47
3.2	8.7	28	10	34	12	39	13	44	14	47
3.3	8.5	28	10	33	12	39	13	44	14	46
3.4	8.4	28	10	33	12	38	13	43	14	46
3.5	8.3	28	10	33	11	38	13	43	14	45
3.6	8.2	27	10	33	11	38	13	42	13	45
3.7	8.1	27	10	32	11	37	13	42	13	44
3.8	8.0	27	10	32	11	37	12	42	13	44
3.9	7.9	27	9.4	32	11	37	12	41	13	44
4.0	7.9	27	9.3	31	11	36	12	41	13	43

Table 6D. Lead (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	0.057	0.12
5 ≤ H < 10	0.096	0.19
10 ≤ H < 15	0.18	0.37
15 ≤ H < 20	0.28	0.57
20 ≤ H < 25	0.39	0.78
25 ≤ H < 30	0.50	1.0
30 ≤ H < 35	0.62	1.2
35 ≤ H < 40	0.75	1.5
40 ≤ H < 45	0.88	1.8
45 ≤ H < 50	1.0	2.0
50 ≤ H < 55	1.1	2.3
55 ≤ H < 60	1.3	2.6
60 ≤ H < 65	1.4	2.9
65 ≤ H < 70	1.6	3.2
70 ≤ H < 75	1.7	3.5
75 ≤ H < 80	1.9	3.8
80 ≤ H < 90	2.1	4.2
90 ≤ H < 100	2.4	4.9
100 ≤ H < 110	2.8	5.6
110 ≤ H < 120	3.1	6.2
120 ≤ H < 130	3.5	6.9
130 ≤ H < 140	3.8	7.7
140 ≤ H < 150	4.2	8.4
150 ≤ H < 200	5.3	11
200 ≤ H < 250	7.3	15
250 ≤ H < 300	9.4	19
300 ≤ H < 350	12	23
350 ≤ H < 400	14	28
H ≥ 400 (non-MUN only)	15	31
H ≥ 400 (MUN only)	15	30

Table 6E. Nickel (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	3.4	6.8
5 ≤ H < 10	4.8	9.6
10 ≤ H < 15	7.4	15
15 ≤ H < 20	9.8	20
20 ≤ H < 25	12	24
25 ≤ H < 30	14	29
30 ≤ H < 35	17	33
35 ≤ H < 40	19	37
40 ≤ H < 45	21	42
45 ≤ H < 50	23	46
50 ≤ H < 55	25	50
55 ≤ H < 60	27	54
60 ≤ H < 65	29	58
65 ≤ H < 70	31	61
70 ≤ H < 75	33	65
75 ≤ H < 80	34	69
80 ≤ H < 90	37	75
90 ≤ H < 100	41	82
100 ≤ H < 110	45	89
110 ≤ H < 120	48	96
120 ≤ H < 130	52	100
130 ≤ H < 140	55	110
140 ≤ H < 150	58	120
150 ≤ H < 200	69	140
200 ≤ H < 250	85	170
250 ≤ H < 300	100	200
300 ≤ H < 350 (non-MUN only)	120	230
350 ≤ H < 400 (non-MUN only)	130	260
H ≥ 400 (non-MUN only)	140	280
H ≥ 300 (MUN only)	100	200

Table 6F. Silver (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	0.012	0.023
5 ≤ H < 10	0.024	0.047
10 ≤ H < 15	0.057	0.11
15 ≤ H < 20	0.10	0.20
20 ≤ H < 25	0.16	0.31
25 ≤ H < 30	0.22	0.44
30 ≤ H < 35	0.29	0.59
35 ≤ H < 40	0.37	0.75
40 ≤ H < 45	0.46	0.93
45 ≤ H < 50	0.56	1.1
50 ≤ H < 55	0.67	1.3
55 ≤ H < 60	0.78	1.6
60 ≤ H < 65	0.90	1.8
65 ≤ H < 70	1.0	2.1
70 ≤ H < 75	1.2	2.3
75 ≤ H < 80	1.3	2.6
80 ≤ H < 90	1.5	3.1
90 ≤ H < 100	1.9	3.7
100 ≤ H < 110	2.1	4.2
110 ≤ H < 120	2.2	4.5
120 ≤ H < 130	2.4	4.8
130 ≤ H < 140	2.6	5.1
140 ≤ H < 150	2.7	5.4
150 ≤ H < 200	3.1	6.3
200 ≤ H < 250	3.8	7.6
250 ≤ H < 300	4.5	8.9
300 ≤ H < 350	5.1	10
350 ≤ H < 400	5.7	11
H ≥ 400	6.0	12

Table 6G. Zinc (Total) Effluent Limitations

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	2.6	5.3
5 ≤ H < 10	6.7	13
10 ≤ H < 15	10	21
15 ≤ H < 20	14	27
20 ≤ H < 25	17	34
25 ≤ H < 30	20	40
30 ≤ H < 35	23	46
35 ≤ H < 40	26	52
40 ≤ H < 45	29	58
45 ≤ H < 50	32	64
50 ≤ H < 55	35	69
55 ≤ H < 60	37	75
60 ≤ H < 65	40	80
65 ≤ H < 70	43	86
70 ≤ H < 75	45	91
75 ≤ H < 80	48	97
80 ≤ H < 90	52	100
90 ≤ H < 100	57	110
100 ≤ H < 110	62	120
110 ≤ H < 120	67	130
120 ≤ H < 130	72	140
130 ≤ H < 140	77	150
140 ≤ H < 150	82	160
150 ≤ H < 200	96	190
200 ≤ H < 250	120	240
250 ≤ H < 300	140	280
300 ≤ H < 350	160	330
350 ≤ H < 400	180	370
H ≥ 400	190	390

2. Whole Effluent Toxicity, Chronic

As specified in the NOA:

a. There shall be no chronic toxicity in the discharge. See the Monitoring and Reporting Program (Attachment C) and the NOA from the Executive Officer.

3. Whole Effluent Toxicity, Acute

For discharges with treatment or liquid mine waste:

a. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70%, minimum for any one bioassay; and

ii. 90%, median for any three consecutive bioassays.

See the Monitoring and Reporting Program (Attachment C) and the NOA from the Executive Officer.

4. Application of Intake Water Credits

For pollutants that have intake water credits granted as part of the NOA, the average pollutant concentration and mass in the effluent shall not exceed the corresponding average concentration and mass as measured in the influent.

For constituents where compliance with an effluent limitation is the measured maximum daily effluent concentration, discharges shall be considered in compliance if the measured maximum daily effluent concentration does not exceed the respective maximum daily intake total metal concentration (sampled on the same calendar day).

Where a facility uses multiple intake sources, the monthly average influent concentration and mass shall be reported based on the flow-weighted amount from each intake source. It shall be assumed that the pollutant concentration from any water sources other than the receiving water has a pollutant concentration that is no greater than the most stringent applicable water quality objective.

5. Discharges to Specific Waterbodies

a. The discharge of pollutants subject to effluent limitations, as identified in the NOA from the Executive Officer, shall not exceed the effluent limitations contained in Tables 7A, 7B, and 7C for all limited threat discharges to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. Effluent limitations contained in Tables 7A, 7B, and 7C for cadmium, copper, and zinc are based on hardness, which shall be provided by the Discharger as part of the application. For each segment the central value between the lower and upper bounds was used to determine the corresponding effluent limit. The effluent

limitations contained in Tables 7A, 7B, and 7C apply in lieu of those contained in Section V.A.1.g, above for respective parameters applicable to the discharge.

Table 7A. Effluent Limitations – Cadmium, Total for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	0.0045	0.0090
5 ≤ H < 10	0.016	0.032
10 ≤ H < 15	0.029	0.058
15 ≤ H < 20	0.043	0.086
20 ≤ H < 25	0.057	0.11
25 ≤ H < 30	0.072	0.14
30 ≤ H < 35	0.088	0.18
35 ≤ H < 40	0.10	0.21
40 ≤ H < 45	0.12	0.24
45 ≤ H < 50	0.14	0.27
50 ≤ H < 55	0.15	0.31
55 ≤ H < 60	0.17	0.34
60 ≤ H < 65	0.19	0.38
65 ≤ H < 70	0.20	0.41
70 ≤ H < 75	0.22	0.45
75 ≤ H < 80	0.24	0.48
80 ≤ H < 90	0.27	0.54
90 ≤ H < 100	0.30	0.61
100 ≤ H < 110	0.34	0.68
110 ≤ H < 120	0.38	0.76
120 ≤ H < 130	0.42	0.84
130 ≤ H < 140	0.46	0.92
140 ≤ H < 150	0.50	1.00
150 ≤ H < 200	0.62	1.2
200 ≤ H < 250	0.83	1.7
250 ≤ H < 300	1.0	2.1
300 ≤ H < 350	1.3	2.5
350 ≤ H < 400	1.5	3.0
H ≥ 400	1.6	3.2

Table 7B. Effluent Limitations – Copper, Total for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City

Hardness in mg/L (H)	Average Monthly (µg/L)	Maximum Daily (µg/L)
H < 5	0.24	0.48
5 ≤ H < 10	0.64	1.3
10 ≤ H < 15	1	2.0
15 ≤ H < 20	1.4	2.8
20 ≤ H < 25	1.7	3.5
25 ≤ H < 30	2.1	4.2
30 ≤ H < 35	2.4	4.9
35 ≤ H < 40	2.8	5.5
40 ≤ H < 45	3.1	6.2
45 ≤ H < 50	3.4	6.8
50 ≤ H < 55	3.7	7.5
55 ≤ H < 60	4.1	8.1
60 ≤ H < 65	4.4	8.8
65 ≤ H < 70	4.7	9.4
70 ≤ H < 75	5	10
75 ≤ H < 80	5.3	11
80 ≤ H < 90	5.8	12
90 ≤ H < 100	6.4	13
100 ≤ H < 110	7	14
110 ≤ H < 120	7.6	15
120 ≤ H < 130	8.2	16
130 ≤ H < 140	8.8	18
140 ≤ H < 150	9.4	19
150 ≤ H < 200	11	22
200 ≤ H < 250	14	28
250 ≤ H < 300	17	34
300 ≤ H < 350	19	39
350 ≤ H < 400	22	44
H ≥ 400	23	47

Table 7C. Effluent Limitations – Zinc, Total for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City

Hardness in mg/L (H)	Average Monthly	Maximum Daily
H < 5	0.81	1.6
5 ≤ H < 10	2.0	4.0
10 ≤ H < 15	3.1	6.2
15 ≤ H < 20	4.1	8.2
20 ≤ H < 25	5.0	10
25 ≤ H < 30	5.9	12
30 ≤ H < 35	6.8	14
35 ≤ H < 40	7.7	15
40 ≤ H < 45	8.5	17
45 ≤ H < 50	9.3	19
50 ≤ H < 55	10	20
55 ≤ H < 60	11	22
60 ≤ H < 65	12	24
65 ≤ H < 70	12	25
70 ≤ H < 75	13	27
75 ≤ H < 80	14	28
80 ≤ H < 90	15	30
90 ≤ H < 100	17	33
100 ≤ H < 110	18	36
110 ≤ H < 120	19	39
120 ≤ H < 130	21	42
130 ≤ H < 140	22	45
140 ≤ H < 150	24	47
150 ≤ H < 200	28	55
200 ≤ H < 250	34	68
250 ≤ H < 300	40	80
300 ≤ H < 350	46	92
350 ≤ H < 400	52	100
H ≥ 400	55	110

c. The discharge of pollutants subject to effluent limitations, as identified in the NOA from the Executive Officer, shall not exceed the effluent limitations contained in Table 8 for all limited threat discharges to all waters in the Sacramento and San Joaquin River Basins and waters designated as COLD in the Tulare Lake Basin. The effluent limitations contained in Table 8 apply in lieu of those contained in Section V.A.1.c and f above for respective parameters applicable to the discharge.

Table 8. Effluent Limitations – Discharges to All Waters in the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin

Parameter	Units	Instantaneous Maximum
Persistent Chlorinated Hydrocarbon Pesticides	µg/L	ND

Table 8 Note:

1. The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L (SIP minimum level). Persistent chlorinated hydrocarbon pesticides include aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

d. **Temperature.** For discharges within the legal boundaries of the Sacramento-San Joaquin Delta, if specified in the NOA, the maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°Fahrenheit (°F).

e. **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)

S_{AMEL} = CD M-avg/0.079 + CC M-avg/0.012 ≤ 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)

S_{AWEL} = CD W-avg/0.16 + CC W-avg/0.025 ≤ 1.0

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

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

B. Technology-Based Effluent Limitations

1. All Discharges

a. **BOD, TSS, and Settleable Solids.** BOD, TSS, and settleable solids in the discharge shall not exceed the effluent limitations in Table 9, below, as identified in the NOA from the Executive Officer.

Table 9. Effluent Limitations for BOD, TSS, and Settleable Solids

Parameter	Units	AMEL	MDEL
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	20
Total Suspended Solids	mg/L	10	20
Settleable Solids	mL/L	--	0.1

2. Volatile Organic Compounds (VOCs) and Perchlorate Applicable to Remediation Sites.

a. The discharge of treated wastewater from site investigations and/or cleanup of sites contaminated with volatile organic compounds and perchlorate shall not exceed the effluent limitations in Table 10, below, as identified in the NOA from the Executive Officer. Table 10 contains a partial list of VOCs and is not intended to limit the Executive Officer from identifying additional VOCs for Water Quality Based Effluent Limitations; all VOCs not listed in Table 10 will have Maximum Daily Effluent Limitations of 0.5 µg/L.

Table 10. VOC and Perchlorate Effluent Limitations for Remediation Projects

Parameter	Units	Maximum Daily Effluent Limitations
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5

Parameter	Units	Maximum Daily Effluent Limitations
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Methylene Chloride	µg/L	0.5
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.5
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Perchlorate	µg/L	4.0
Stoddard Solvent	µg/L	0.5
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

b. For the Boeing Company's groundwater extraction and treatment (GET) systems, Mather GET H-B and Southern Groundwater Study Area (SGSA) GET, the effluent limitations for chloroform and cis-1,2-dichloroethene in Table 11 apply.

Table 11. Chloroform and cis-1,2-dichloroethene for SGSA GET and Mather GET H-B

Parameter	Units	Maximum Daily Effluent Limitations	Location
chloroform	µg/L	3.0	Mather GET H-B
cis-1,2-Dichloroethene	µg/L	1.0	SGSA GET

3. Discharges Active from Mines Other Than Placer Deposits.

Mine drainage is defined at 40 C.F.R. section 440.132(h) as "*any water drained, pumped, or siphoned from a mine*". The discharge from active mining and milling activities and in mine drainage from active copper, lead, zinc, gold, silver, and molybdenum mines shall not exceed the effluent limitations in Table 11, as identified in the NOA from the Executive Officer. Water Quality Based Effluent Limitations may

be more stringent than the listed Technology Based Effluent Limitations in Table 11 and will be discussed further in the NOA.

Table 12. Technology-Based Effluent Limitations Applicable to Discharges from Active Hard Rock Mines

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation
pH	standard units	--	--	6.0	9.0
Total Suspended Solids	mg/L	20	30	--	--
Cadmium, Total	µg/L	50	100	--	--
Copper, Total	µg/L	150	300	--	--
Lead, Total	µg/L	300	600	--	--
Mercury, Total	µg/L	1.0	2.0	--	--
Zinc, Total	µg/L	750	1,500	--	--

4. Petroleum Fuel Pollution Remediation Projects.

Discharges of treated groundwater from cleanup of petroleum fuel pollution shall not exceed the effluent limitations in Table 12, below, as identified in the NOA from the Executive Officer. More stringent Water Quality-Based Effluent Limitations for the constituents listed in Table 12 may be included in the NOA, if applicable.

Table 13. Effluent Limitations – Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations
Benzene	µg/L	--	0.5
Ethylbenzene	µg/L	--	0.5
1,2-Dichloroethane	µg/L	0.38	0.5
Naphthalene	µg/L	--	5.0
Toluene	µg/L	--	0.5
Di-isopropyl Ether	µg/L	--	5
Ethylene Dibromide	µg/L	0.05	0.10
Ethyl Tertiary Butyl Ether	µg/L	--	5
Methanol	µg/L	--	20
Methyl Tertiary Butyl Ether	µg/L	--	1.0
Carcinogenic Polycyclic Aromatic Hydrocarbons	µg/L	0.0044	0.0088
Tertiary Amyl Methyl Ether	µg/L	--	1.0
Tertiary Butyl Alcohol	µg/L	--	10
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	--	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	--	50
Xylene	µg/L	--	0.5

Table 12 Notes:

1. **Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs).** Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluroanthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

2. **Xylene.** Applies to the sum of o-xylene, m-xylene, and p-xylene.

5. Hydroelectric Power Projects.

The discharge of treated wastewater from hydroelectric power projects shall not exceed the effluent limitations in Table 13, below, as identified in the NOA from the Executive Officer.

Table 14. Effluent Limitations – Hydroelectric Power Projects

Parameter	Units	Maximum Daily Effluent Limitation
Oil and Grease	mg/L	15

6. **Alum Application for Phosphorus Sequestration**

The Discharger shall implement best management practices (BMPs) provided in its approved APP when applying alum for phosphorus sequestration to reduce or prevent impacts to beneficial uses of the receiving water.

VI. LAND DISCHARGE SPECIFICATIONS – NOT APPLICABLE

VII. RECYCLING SPECIFICATIONS – NOT APPLICABLE

VIII. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plans for the Sacramento and San Joaquin River Basin and the Tulare Lake Basin and are a required part of this General Order. Compliance with any amendment or revision to the water quality objectives contained in the Basin Plans adopted by the Central Valley Water Board subsequent to adoption of this General Order is also required. Any discharge authorized for coverage under this General Order shall not cause the following in the receiving water:

1. **Un-ionized Ammonia**. Un-ionized ammonia to be present in amounts that adversely affect beneficial uses nor to be present in excess of 0.025 mg/L (as N) in the Tulare Lake Basin.

2. **Bacteria**. The six-week rolling geometric mean of Escherichia coli (E. coli) shall not exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

3. **Biostimulatory Substances**. Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

4. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses.

5. **Color**. Discoloration that causes nuisance or adversely affects beneficial uses.

6. **Dissolved Oxygen**:

    a. For water bodies outside the Sacramento-San Joaquin Delta and for water bodies in the Tulare Lake Basin:

        i. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass (at centroid of flow for water bodies in the Tulare Basin);

ii. The 95-percentile dissolved oxygen concentration to fall below 75 percent of saturation;

iii. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time for water bodies designated as warm freshwater habitat (WARM); or

iv. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time for water bodies designated as cold freshwater habitat (COLD) and/or spawning, reproduction, and/or early development (SPWN).

b. Within the legal boundaries of the Sacramento-San Joaquin Delta, the dissolved oxygen concentrations shall not be reduced below:

i. 7.0 mg/L in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge;

ii. 6.0 mg/L in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and

iii. 5.0 mg/L in all other Delta waters except those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.

7. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

8. **Oil and Grease**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

9. **pH**.

a. The pH to be depressed below 6.5 or raised above 8.5 for waterbodies in the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County).

b. The pH to be depressed below 7.5 nor raised above 9.5 within Goose Lake in Modoc County.

c. The pH to be depressed below 6.5, raised above 8.3, nor changed by more than 0.3 units for waterbodies in the Tulare Lake Basin.

10. **Pesticides**:

a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer for water bodies in the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for water bodies in the Tulare Basin designated as cold freshwater habitat (COLD);

d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR section 131.12.) for water bodies in the Sacramento and San Joaquin River Basins;

e. Pesticide concentrations to exceed the lowest levels technically and economically achievable for water bodies in the Sacramento and San Joaquin River Basins;

f. Pesticides to be present in concentration in excess of the maximum contaminant levels (MCLs) set forth in CCR, Title 22, division 4, chapter 15 for water bodies in the Sacramento and San Joaquin River Basins or specified in Table 64444-A (Organic Chemicals) of section 64444 of Title 22 of the CCR for water bodies in the Tulare Basin designated as municipal and domestic supply (MUN); nor

g. Thiobencarb to be present in excess of 1.0 µg/L for water bodies in the Sacramento and San Joaquin River Basins designated as municipal and domestic supply (MUN).

11. **Radioactivity**:

    a. Radionuclides to be present in concentrations that are harmful or deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

    b. Radionuclides to be present in excess of the MCLs specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the California Code of Regulations for water bodies designated as municipal and domestic supply (MUN).

12. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

13. **Settleable Substances**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

14. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

15. **Taste and Odors**. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses or to domestic or municipal water supplies**.**

16. **Temperature**. Where receiving water temperature limitations apply, as specified in the NOA:

    a. For water bodies outside the legal boundaries of the Sacramento-San Joaquin Delta, the natural temperature to be increased by more than 5°F.

    b. For water bodies within the legal boundaries of the Sacramento-San Joaquin Delta the discharge shall not cause the following in the water body:

        i. The creation of a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of the river channel at any point.

        ii. A surface water temperature rise greater than 4°F above the natural temperature of the receiving water at any time or place.

    c. For discharges to Deer Creek, source to Cosumnes River, temperature changes due to controllable factors shall not cause creek temperatures to exceed the objectives specified in Table 14.

Table 15. Temperature Receiving Water Limitations for Deer Creek

Period	Daily Maximum (°F)	Monthly Average (°F)
January and February	63	58
March	65	60
April	71	64
May	77	68
June	81	74
July through September	81	77
October	77	72
November	73	65
December	65	58

17. **Toxicity**.

    a. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

18. **Turbidity**. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

    a. For waterbodies in the Sacramento and San Joaquin River Basins, turbidity:

i. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

ii. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

iii. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

iv. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

v. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.

b. For waterbodies in the Tulare Lake Basin, turbidity shall not increase:

i. More than 1 NTU where natural turbidity is between 0 and 5 NTUs.

ii. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

iii. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.

iv. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations – Not Applicable

IX. PROVISIONS

A. Standard Provisions

1. All Dischargers authorized to discharge under this General Order shall comply with all Standard Provisions (federal NPDES standard conditions from 40 C.F.R. part 122) included in Attachment B of this General Order.

2. All Dischargers authorized to discharge under this General Order shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this General Order, the more stringent provision shall apply:

a. After notice and opportunity for a hearing, this General Order may be terminated or modified for cause, including, but not limited to:

i. violation of any term or condition contained in this Order;

ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

iv. a material change in the character, location, or volume of discharge.

The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

b. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this General Order, the Central Valley Water Board will revise or modify this General Order in accordance with such toxic effluent standard or prohibition.

All Dischargers authorized to discharge under this General Order shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this General Order has not yet been modified.

c. This General Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in this General Order; or

ii. Controls any pollutant limited in this General Order.

The General Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

d. The provisions of this General Order are severable. If any provision of this General Order is found invalid, the remainder of this Order shall not be affected.

e. All Dischargers shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this General Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

f. A copy of this General Order and the NOA shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

g. Safeguard to electric power failure:

i. All Dischargers with active treatment authorized to discharge under this General Order shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this General Order.

ii. Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.

iii. Should the treatment system not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this General Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this General Order.

h. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section IX.A.2.i below, of this General Order.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

i. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein 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. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

j. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

k. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this General Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

   To assume operation under this General Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of enrollment under this General Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment B, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this General Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

l. Failure to comply with provisions or requirements of this General Order, or violation of other applicable laws or regulations governing discharges from the discharge facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

m. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this General Order, the Discharger shall notify the Central Valley Water Board by telephone within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

Fresno Office:	(559) 445-5116
Rancho Cordova Office:	(916) 464-3291
Redding Office:	(530) 224-4845

B. Monitoring and Reporting Program (MRP) Requirements

All Dischargers authorized to discharge under this General Order shall comply with the MRP, and future revisions thereto, in Attachment C of this Order and as specified in the NOA from the Executive Officer.

C. Special Provisions

1. Reopener Provisions

a. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including, but not limited to:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

b. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this General Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page:
(https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Closure Certification for Discharges from Drinking Water Supply Systems.** If a drinking water supply system Discharger received an exception as allowed by section 5.3 of the SIP, then upon termination of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Closure Certification is to be submitted with the request for termination of coverage (Attachment E).

b. **Toxicity Reduction Evaluation Requirements (For Dischargers With Chronic Toxicity Monitoring).** For compliance with the Basin Plan's narrative toxicity objective, this General Order requires discharges greater than or equal to 120 days in duration or 0.25 MGD, discharges of liquid mine waste, or discharges with active treatment to conduct chronic whole effluent toxicity (WET) testing, as specified in the MRP (Attachment C, section V). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger may be required to submit a report of waste discharge for application for an individual NPDES permit. This Provision includes procedures for accelerated chronic toxicity monitoring.

i. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate accelerated monitoring is >1 TUc, or as specified in the NOA by the Executive Officer (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring.

ii. **Chronic Toxicity Monitoring Trigger Exceeded.** If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing and the Discharger has 60 or more days remaining prior to termination of the project, the Discharger shall initiate accelerated monitoring upon notification by the laboratory of the exceedance. Accelerated monitoring shall consist of two additional chronic toxicity tests of the species that exceeded the chronic toxicity monitoring trigger to evaluate compliance using a 6-week median. See Compliance Determination Section X.K for procedures for calculating 6-week median.

If the 6-week median is greater than 1.3 TUc (as $100/EC_{25}$ or $100/IC_{25}$) and the percent effect is greater than 25 percent at 100 percent effluent, proceed with subsection (c). Otherwise, the Discharger shall check for any operation or sample collection issues and return to routine chronic toxicity monitoring. The following protocol shall be used for accelerated monitoring:

(a) If the results of accelerated monitoring tests do not exceed the 6-week median, the Discharger may resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is

adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger cease discharging to surface water under this General Order and require submittal of a report of waste discharge for application for an individual NPDES permit in order to continue discharging to surface water.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility, and upon confirmation that the effluent toxicity has been removed, the Discharger may resume regular chronic toxicity monitoring.

(c) If the results of the accelerated monitoring toxicity tests exceed the 6-week median, the discharge may no longer be eligible for coverage under this Order. To continue coverage under this Order, the Discharger must demonstrate to the satisfaction of the Executive Officer that the discharge is not causing chronic toxicity in the receiving water. Otherwise, in order to continue discharging to surface water the discharger must submit a report of waste discharge for application for an individual NPDES permit. The discharge to surface water shall not continue until the Executive Officer authorizes continued coverage under this General Order or until the Central Valley Water Board adopts an individual NPDES permit for the discharge. For compliance with the Basin Plan's toxicity objective, this General Order requires the following discharges to conduct chronic whole effluent toxicity (WET) testing, as specified in the MRP (Attachment C, section V): Discharges greater than or equal to 120 days in duration, 0.25 MGD in volume, of liquid mine waste, or with treatment shall conduct chronic toxicity testing as specified in the NOA to determine whether the effluent is contributing chronic toxicity to the receiving water.

3. Best Management Practices and Pollution Prevention

a. **Best Management Practices (BMPs).** Dischargers authorized to discharge under this General Order shall develop and implement BMP's, as specified in the NOA, that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of pollutants from the discharge facility to waters of the State. The BMPs shall be consistent with the general guidance contained in the U.S. EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed that will ensure proper operation and maintenance, prevent the additional chemicals or other substances from being introduced into the discharge, and prevent the addition of pollutants from the other non-permitted process waters, spills, or other sources of pollutants at the discharge facility. The necessary BMPs shall be identified, developed, and implemented prior to the initiation of the discharge to ensure compliance with this General Order and with the effluent limitations specified in the NOA. Each Discharger shall update and amend the BMP Plan as necessary to maintain compliance with this General Order. Each Discharger shall make the BMP Plan available to Central Valley Water Board staff upon request.

b. Pollution Prevention and Monitoring and Reporting Plan (PPMRP). Water suppliers enrolling under this General Order that have or propose to have multiple discharge points shall prepare and implement a PPMRP in lieu of the specific Effluent Monitoring Requirements and Receiving Water Monitoring Requirements contained in sections IV and VIII of the Monitoring and Reporting Program (Attachment C). The PPMRP must be submitted with the Notice of Intent and is subject to approval by the Executive Officer. The PPMRP shall include, at a minimum, the elements identified in Attachment F and shall be prepared and implemented in accordance with the General Monitoring Provisions, Other Monitoring Requirements, and Reporting Requirements contained in sections I, IX, and X, respectively, of the Monitoring and Reporting Program (Attachment C).

c. Salinity Evaluation and Minimization Plan. For projects with discharge greater than or equal to 180 days, as specified in the NOA, the Discharger shall prepare or continue to implement a salinity evaluation and minimization plan to identify and address sources of salinity discharged from the Facility. The plan shall be completed and submitted to the Central Valley Water Board by the due date in the NOA. Under limited circumstances when groundwater is naturally high in salinity and source control is infeasible, for example construction dewatering projects, the requirement to submit a Salinity Evaluation and Minimization Plan may not be specified in the NOA.

If the Discharger has an existing salinity evaluation and minimization plan, the Discharger shall evaluate the effectiveness of the salinity evaluation and minimization plan and provide a summary with the Notice of Intent.

Furthermore, **for enrollees under the Salt Control Program's Alternative Salinity Permitting Approach**, if the effluent annual average calendar year electrical conductivity concentration exceeds the respective performance-based electrical conductivity trigger in Table 15 below, 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 exceeds the performance-based electrical conductivity trigger.

Table 16. Annual Average Effluent Triggers for Electrical Conductivity at 25°C (µmhos/cm)

Maximum or Annual Average Electrical Conductivity (µmhos/cm)	Annual Average Electrical Conductivity Trigger using Annual Average Effluent Electrical Conductivity(µmhos/cm)	Annual Average Electrical Conductivity Effluent Trigger using Maximum Electrical Conductivity Concentration (µmhos/cm)
700 < EC ≤ 800	940	1,100
800 < EC ≤ 900	1,100	1,300
900 < EC ≤ 1,000	1,200	1,400

Maximum or Annual Average Electrical Conductivity (µmhos/cm)	Annual Average Electrical Conductivity Trigger using Annual Average Effluent Electrical Conductivity(µmhos/cm)	Annual Average Electrical Conductivity Effluent Trigger using Maximum Electrical Conductivity Concentration (µmhos/cm)
1,000 < EC ≤ 1,100	1,300	1,600
1,100 < EC ≤ 1,200	1,400	1,700
1,200 < EC ≤ 1,300	1,600	1,900
1,300 < EC ≤ 1,400	1,700	2,000
1,400 < EC ≤ 1,500	1,800	2,200
1,500 < EC ≤ 1,600	1,900	2,300
1,600 < EC ≤ 1,700	2,100	2,500
1,700 < EC ≤ 1,800	2,200	2,600
1,800 < EC ≤ 1,900	2,300	2,800
1,900 < EC ≤ 2,000	2,400	2,900
2,000 < EC ≤ 2,100	2,600	3,100
2,100 < EC ≤ 2,200	2,700	3,200
2,200 < EC ≤ 2,300	2,800	3,400
2,300 < EC ≤ 2,400	2,900	3,500
2,400 < EC ≤ 2,500	3,100	3,700
2,500 < EC ≤ 2,600	3,200	3,800
2,600 < EC ≤ 2,700	3,300	4,000
2,700 < EC ≤ 2,800	3,400	4,100
2,800 < EC ≤ 2,900	3,600	4,300
2,900 < EC ≤ 3,000	3,700	4,400
EC > 3,000	3,800	4,500

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Publicly-Owned Treatment Works (POTWs Only) – Not Applicable

6. Other Special Provisions

a. Collected screenings and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23 of the CCR and approved by the Executive Officer.

Any proposed change in solids use or disposal practice shall be reported to the Executive Officer and U.S. EPA Regional Administrator at least 90 days in advance of the change.

b. **Requirements for Dischargers Applying Alum for Phosphorus Sequestration**.

i. **Application Schedule.** The Discharger shall provide a phone number or other specific contact information to all persons who request the Discharger's application schedule. The Discharger shall provide the requester with the most current application schedule and inform the requester if the schedule is subject to change. Information may be made available by electronic means, including posting prominently on a well-known website.

ii. **Public Notice Requirements.** Every calendar year, at least 15 days prior to the first application of alum, the Discharger shall notify potentially affected public agencies. The Discharger shall post the notification on its website if available. The notification shall include the following information:

(a) A statement of the discharger's intent to apply alum;

(b) Purpose of use;

(c) General time period and locations of expected use;

(d) Any water use restrictions or precautions during treatment; and

(e) A phone number that interested persons may call to obtain additional information from the Discharger.

iii. **Alum Application Plan (AAP).** Dischargers shall submit an AAP with their Notice of Intent documents. Elements of the AAP are described in Attachment K.

iv. **AAP Processing, Approval, and Modifications.** Upon receipt of the AAP, staff will review the AAP for completeness and applicability for this General Permit and post on the Board's website for a 30-day public comment period. If no comments are received and staff deem the AAP complete, the AAP will be incorporated into the NOA. If comments are received, staff will work with the Discharger to address comments to allow for NOA issuance as expeditiously as possible. Once approved, the AAP will be incorporated into the NOA

Changes to the AAP must be submitted to NPDES permitting for approval and may require additional public comment prior to issuance of an amended NOA.

7. Compliance Schedules – Not Applicable

X. COMPLIANCE DETERMINATION

A. Instantaneous Maximum Effluent Limitation for Persistent Chlorinated Hydrocarbon Pesticides (Sections V.A.1.c and V.A.1.f). The non-detectable (ND) instantaneous maximum effluent limitation for persistent chlorinated hydrocarbon pesticides applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use U.S. EPA standard analytical techniques for analyzing persistent chlorinated hydrocarbon pesticides with a maximum reporting level (RL) not to exceed the minimum levels (MLs) listed in Appendix 4 of the SIP (Table 2d). If the analytical result of a single effluent grab

sample is detected for any persistent chlorinated hydrocarbon pesticide and the result is greater than or equal to the applicable ML listed in Appendix 4 of the SIP, a violation will be flagged and the Discharger will be considered out of compliance for that single sample.

B. Aluminum Effluent Limitations (Section V.A.1.e and V.A.1.e.i). Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

C. Total Residual Chlorine Effluent Limitations (Table 3A, Section V.A.1.e). Monitoring for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. For Dischargers that dechlorinate, field monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment B).

D. Volatile Organic Compounds (VOCs) Average Monthly Effluent Limitation (Section V.A.1.f). VOCs include all constituents listed in U.S. EPA Method 502.2 (Attachment C, Table C-4). The average monthly effluent limitation of less than 0.5 µg/L applies to each VOCs. When calculating the average monthly of each VOC, non-detect results shall be counted as one-half the detection level.

F. Priority Pollutant Effluent Limitations (Section V.A.1.f). Compliance with effluent limitations for priority pollutants shall be determined in accordance with section 2.4.5 of the SIP, as follows:

1. Dischargers shall be deemed out of compliance with an effluent limitation, if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 of the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:

    a. sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the RL; or

    b. sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL).

3. When determining compliance with an average monthly effluent limitation (AMEL) and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

    a. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

    b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

4. If a sample result, or the arithmetic mean or median of multiple sample results, is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall **not** be deemed out of compliance.

F. Dissolved Oxygen Receiving Water Limitation (Section VIII.A.6). Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the NOA, will be used to determine compliance with parts VIII.A.6.a.iii, VIII.A.6.a.iv, VIII.A.6.b.i, VIII.A.6.b.ii, and VIII.A.6.b.iii of the dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in the receiving water to be reduced below the applicable dissolved oxygen concentration at any time. However, should more frequent dissolved oxygen receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts VIII.A.6.a.i and VIII.A.6.a.ii.

G. pH Receiving Water Limitation (Section VIII.A.9). Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance

with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the NOA, will be used to determine compliance with section VIII.A.9, the pH receiving water limitation to ensure the discharge does not cause the pH in the receiving water to be changed more than allowed in parts VIII.A.9.a, VIII.A.9.b, and VIII.A.9.c.

H. Temperature Receiving Water Limitation (Section VIII.A.16). Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the NOA, will be used to determine compliance with section VIII.A.16.

I. Temperature Effluent Limitations (Section V.A.5.d). Compliance with the final effluent limitations for temperature shall be ascertained using the daily average effluent temperature at Monitoring Location EFF-001 and the daily average temperature of the upstream receiving water measured on the same day at the upstream receiving water Monitoring Location (RSW-001 or as specified in the NOA).

J. Turbidity Receiving Water Limitation (Section VIII.A.18). Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the NOA, will be used to determine compliance with section VIII.A.18, the turbidity receiving water limitation to ensure the discharge does not cause the turbidity in the receiving water to be increased.

K. Chronic Whole Effluent Toxicity Effluent Trigger (Section VI.C.2.b.i). To evaluate compliance with the chronic whole effluent toxicity effluent trigger, the median chronic toxicity units (TUc) shall be the median of up to three consecutive chronic toxicity bioassays during a six- week period. This includes a routine chronic toxicity monitoring event and two subsequent optional compliance monitoring events. If additional compliance monitoring events are not conducted, the median is equal to the result for routine chronic toxicity monitoring event. If only one additional compliance monitoring event is conducted, the median will be established as the arithmetic mean of the routine monitoring event and compliance monitoring event.

Where the median chronic toxicity units exceed 1 TUc (as 100/NOEC) for any end point, the Discharger will be deemed as exceeding the chronic toxicity effluent trigger if the median chronic toxicity units for any endpoint also exceed a reporting level of 1.3 TUc (as $100/EC_{25}$ or $100/IC_{25}$) AND the percent effect at 100% effluent exceeds 25 percent. If the NOA specifies a chronic toxicity trigger that exceeds 1 TUc, where the median chronic toxicity units exceed the trigger, the Discharger will be deemed out of compliance with the chronic toxicity effluent trigger if the median percent effect at the respective effluent concentration for the same endpoint also exceeds 25 percent. The percent effect used to evaluate compliance with the chronic toxicity effluent trigger shall

be based on the chronic toxicity bioassay result(s) from the sample(s) used to establish the median TUc result. If the median TUc is based on two equal chronic toxicity bioassay results, the percent effect of the sample with the greatest percent effect shall be used to evaluate compliance with the chronic toxicity effluent trigger.

ATTACHMENT A – DEFINITIONS

Acute Aquatic Toxicity Test
A test to determine an adverse effect (usually lethality) on a group of aquatic test organisms during a short-term exposure (e.g., 24, 48, or 96 hours).

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Calendar Year
A period of time defined as twelve consecutive calendar months.

Chronic Aquatic Toxicity Test
A test to determine an adverse effect (sub-lethal or lethal) on a group of aquatic test organisms during an exposure of duration long enough to assess sub-lethal effects.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with

limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Effect Concentration (EC)
A point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g., Probit Model). EC_{25} is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Endpoint
An effect that is measured in a toxicity study. Endpoints in toxicity tests may include, but are not limited to survival, reproduction, and growth. A measured response of a receptor to a stressor. An endpoint can be measured in a toxicity test or field survey.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inhibition Concentration
Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC_{25} is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Instream Waste Concentration (IWC)
The concentration of effluent in the receiving water after mixing.

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If

the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
MDL is the minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in in 40 C.F.R. Part 136, Attachment B.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

No-Observed-Effect-Concentration (NOEC)
The highest concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test, that causes no observable adverse effects on the test organisms (i.e., the highest concentration of toxicant in which the values for the observed responses are not statistically significantly different from the controls).

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Percent Effect
The percent effect at the instream waste concentration (IWC) shall be calculated using untransformed data and the following equation:

$$\text{Percent Effect of the Sample} = \frac{\text{Mean Control Response} - \text{Mean Sample Response}}{\text{Mean Control Response}} \cdot 100$$

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Valley Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and

implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Central Valley Water Board.

Response
A measured biological effect (e.g., survival, reproduction, growth) as a result of exposure to a stimulus.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum [(x - \mu)^2] / (n - 1))^{0.5}$$

where:

x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Statistical Threshold Value (STV): The STV for the bacteria receiving water limitation is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a stepwise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply:

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. section 122.41(a); Wat. Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. section 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. section 122.41(c).)

C. 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. (40 C.F.R. section 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes having adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. section 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. section 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. section 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Central Valley Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. section 1318(a)(4)(B); 40 C.F.R. section 122.41(i); Wat. Code, section 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(1); Wat. Code, sections 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(2); Wat. Code, sections 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(3); Wat. Code, section 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C section 1318(a)(4)(B); 40 C.F.R. section 122.41(i)(4); Wat. Code, sections 13267, 13383.)

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. section 122.41(m)(1)(i).)

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. section 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the

provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. section 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Central Valley Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. section 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. section 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. section 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Central Valley Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. section 122.41(m)(4)(i)(C).)

4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. section 122.41(m)(4)(ii).)

5. **Notice**

   a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Central Valley Water Board.

   b. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Central Valley Water Board.

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. section 122.41(n)(1).)

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the

requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. section 122.41(n)(2).)

2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. section 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. section 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. section 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. section 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. section 122.41(n)(3)(iv).)

3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. section 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. section 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. section 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate

such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. section 122.41(l)(3); 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. section 122.41(j)(1).)

B. Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when the method has the lowest ML of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter, or when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and:

    a. The method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter, or;

    b. The method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge;

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. Part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. sections 122.21(e)(3), 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), 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, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Central Valley Water Board Executive Officer at any time. (40 C.F.R. section 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. section 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. section 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. section 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. section 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. section 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. section 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. section 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. section 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. section 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Valley Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Central Valley Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. section 122.41(h); Wat. Code, sections 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. section 122.41(k).)

2. All permit applications shall be signed in accordance with the following:

   a. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer

means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. section 122.22(a)(1).)

b. For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. section 122.22(a)(2).)

c. For a municipality, state, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. section 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. section 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. section 122.22(b)(2)); and

   c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 C.F.R. section 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Central Valley Water

Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. section 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, 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." (40 C.F.R. section 122.22(d).)

6. Any person providing the electronic signature for such documents described in Standard Provision – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R section 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment C) in this Order. (40 C.F.R. section 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of 21 December 2016, all reports and forms must be submitted electronically to the initial recipient, defined in Standard Provisions – Reporting V.J, and comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. section 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Valley Water Board. (40 C.F.R. section 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. section 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. section 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

F. Planned Changes

The Discharger shall give notice to the Central Valley Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. section 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. section 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. section 122.41(l)(1)(ii).)

   The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. section 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. section 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. section 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. The Central Valley Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. section 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Valley Water Board**,** State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. section 122.41(l)(8).)

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. section 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Valley Water Board as soon as they know or have reason to believe (40 C.F.R. section 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that

discharge will exceed the highest of the following "notification levels" (40 C.F.R. section 122.42(a)(1)):

a. 100 micrograms per liter (µg/L) (40 C.F.R. section 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. section 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. section 122.42(a)(1)(iii)); or

d. The level established by the Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. section 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. section 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. section 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. section 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. section 122.42(a)(2)(iii)); or

d. The level established by the Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. section 122.42(a)(2)(iv)

ATTACHMENT C – MONITORING AND REPORTING PROGRAM

Table of Contents

Tables

ATTACHMENT C – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. section 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations. Specific monitoring requirements for constituents with effluent limitations will be specified in the NOA.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.

B. Final effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory accredited for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health), in accordance with the provision of Water Code section 13176. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event an accredited laboratory is not available to the Discharger for any onsite field measurements such as pH, dissolved oxygen (DO), turbidity, temperature, and residual chlorine, such analyses performed by a non-accredited laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, DO, turbidity, temperature, and residual chlorine must be kept onsite and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. Laboratory analytical methods shall be sufficiently sensitive in accordance with the Sufficiently Sensitive Methods Rule (SSM Rule) specified under 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). A U.S. EPA-approved analytical method is sufficiently sensitive for a pollutant/parameter where:

1. The method minimum level (ML) is at or below the applicable water quality objective for the receiving water, or;

2. The method ML is above the applicable water quality objective for the receiving water but the amount of the pollutant/parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant/parameter, or;

3. the method ML is above the applicable water quality objective for the receiving water, but the ML is the lowest of the 40 C.F.R. 136 U.S. EPA-approved analytical methods for the pollutant/parameter.

G. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Resources Control Board at the following address or electronically via email to the DMR-QA Coordinator:

State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.

I. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

J. Monitoring intervals and requirements for intermittent discharges will be addressed by the Executive Officer in the NOA.

K. For intermittent discharges, upon startup of the discharge, the Discharger shall monitor and record data for all constituents listed in the NOA. The frequency of subsequent analysis will then follow the schedule described in Attachment C, the Monitoring and Reporting Program, and specified in the NOA. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies stated in the NOA.

L. For drinking water system discharges, the Executive Officer may refer to the State Water Board's NPDES Order WQ 2014-0194-DWQ when establishing monitoring requirements in the NOA.

II. MONITORING LOCATIONS

Dischargers applying alum for phosphorous sequestration will establish receiving water monitoring locations in their Alum Application Plan (AAP), per requirements set forth in Attachment K. All other Dischargers shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this General Order:

Table C-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	A location where a representative sample of the influent to the Facility can be collected.
001	EFF-001	A location where a representative sample of the effluent discharged at Discharge Point 001 can be collected prior to discharging to surface water.
--	RSW-001	The receiving water, approximately 200 feet upstream of Discharge Point 001 or as defined in the NOA.
--	RSW-002	The receiving water, approximately 200 feet downstream of Discharge Point 001 or as defined in the NOA.
002	EFF-002	If applicable, a location where a representative sample of the effluent discharged at Discharge Point 002 can be collected prior to discharging to surface water.
--	RSW-003	The receiving water, approximately 200 feet upstream of Discharge Point 002 or as defined in the NOA.
--	RSW-004	The receiving water, approximately 200 feet downstream of Discharge Point 002 or as defined in the NOA.

Table C-1 Notes:

1. Dischargers enrolled under this General Order for more than one discharge point must comply with effluent limitations and monitoring requirements at each discharge point.

2. Additional discharge points may be added following the naming conventions used in Table C-1, above

3. Monitoring Station Locations may be further described in the NOA and are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. When required in the Discharger's NOA, the Discharger shall monitor the waste discharge at Monitoring Location INF-001 in accordance with Table C-2 and the testing requirements described in section III.A.2 below. The NOA will specify which constituents must be monitored regularly for each discharge point, the minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter), and where applicable, units and sample type. Monitoring results are to be submitted in the SMRs.

Table C-2. Influent Monitoring

CTR Number	Parameter	Units	Sample Type
--	Influent Flow Rate	As specified in the NOA	As specified in the NOA
--	Total Suspended Solids	mg/L	Grab
--	Dissolved Oxygen	mg/L	Grab
--	pH	standard units	Grab
--	Temperature	°F	Grab
--	Electrical Conductivity @ 25°C	µmhos/cm	Grab
--	Total Dissolved Solids	mg/L	Grab
--	Color	Color Units	Grab
--	Oil and Grease	mg/L	Grab
--	Turbidity	NTU	Grab
--	Aluminum, Total	µg/L	Grab
--	Barium, Total	µg/L	Grab
--	Boron	mg/L	Grab
--	Chloride	mg/L	Grab
--	Chromium, Total	µg/L	Grab
--	Fluoride	µg/L	Grab
--	Iron, Total	µg/L	Grab
--	Manganese, Total	µg/L	Grab
--	Mercury, Methyl	ng/L	Grab
--	Molybdenum	µg/L	Grab
--	Nitrate Nitrogen, Total (as N)	mg/L	Grab

CTR Number	Parameter	Units	Sample Type
--	Nitrite (as N)	mg/L	Grab
--	Nitrate plus Nitrite (as N)	mg/L	Grab
--	Perchlorate	µg/L	Grab
--	Phosphorus, Total (as P)	mg/L	Grab
--	Sulfate	mg/L	Grab
--	Sulfide (as S)	mg/L	Grab
--	Sulfite (as SO_3)	mg/L	Grab
--	Tributyltin	µg/L	Grab
--	1,2-Dichloroethene (cis and trans DCE)	µg/L	Grab
--	1,2-Dibromo-3-Chloropropane (DBCP)	µg/L	Grab
--	1,2,3-Trichloropropane (TCP)	µg/L	Grab
--	1,3-Butadiene	µg/L	Grab
--	1,3-Dichloropropene (cis and trans)	µg/L	Grab
--	2-Butanone (Methyl ethyl ketone or MEK)	µg/L	Grab
--	2-Chloroethylvinyl ether	µg/L	Grab
--	2-Hexanone (Methyl n-butyl ketone)	µg/L	Grab
--	3-Methyl-4-Chlorophenol	µg/L	Grab
--	Acetone	µg/L	Grab
--	Carbon Disulfide	µg/L	Grab
--	Chloromethane (Methyl chloride)	µg/L	Grab
--	MTBE (Methyl tertiary butyl ether)	µg/L	Grab
--	Styrene	µg/L	Grab
--	Trichlorofluoromethane (Freon 11)	µg/L	Grab
--	Xylenes	µg/L	Grab
1	Antimony, Total	µg/L	Grab
2	Arsenic, Total	µg/L	Grab
3	Beryllium, Total	µg/L	Grab
4	Cadmium, Total	µg/L	Grab
5a	Chromium (III)	µg/L	Grab
5b	Chromium (VI)	µg/L	Grab
6	Copper, Total	µg/L	Grab
7	Lead, Total	µg/L	Grab
8	Mercury, Total	µg/L	Grab
9	Nickel, Total	µg/L	Grab
10	Selenium, Total	µg/L	Grab
11	Silver, Total	µg/L	Grab
12	Thallium, Total	µg/L	Grab
13	Zinc, Total	µg/L	Grab
14	Cyanide, Total (as CN)	µg/L	Grab
17	Acrolein	µg/L	Grab
18	Acrylonitrile	µg/L	Grab
19	Benzene	µg/L	Grab
20	Bromoform	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
21	Carbon Tetrachloride (Freon 10)	µg/L	Grab
22	Chlorobenzene	µg/L	Grab
23	Chlorodibromomethane	µg/L	Grab
24	Chloroethane	µg/L	Grab
25	2-Chloroethylvinyl Ether	µg/L	Grab
26	Chloroform	µg/L	Grab
27	Dichlorobromomethane	µg/L	Grab
28	1,1-Dichloroethane (DCA)	µg/L	Grab
29	1,2-Dichloroethane (DCA)	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	µg/L	Grab
31	1,2-Dichloropropane	µg/L	Grab
32	1,3-Dichloropropylene	µg/L	Grab
33	Ethylbenzene	µg/L	Grab
34	Methyl Bromide (Bromomethane)	µg/L	Grab
35	Methyl Chloride (Chloromethane)	µg/L	Grab
36	Methylene Chloride (Dichloromethane)	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	µg/L	Grab
38	Tetrachloroethylene (PCE)	µg/L	Grab
39	Toluene	µg/L	Grab
40	1,2-Trans-Dichloroethylene (DCE)	µg/L	Grab
41	1,1,1-Trichloroethane (TCA)	µg/L	Grab
42	1,1,2-Trichloroethane (TCA)	µg/L	Grab
43	Trichloroethylene (TCE)	µg/L	Grab
44	Vinyl Chloride (Chloroethene)	µg/L	Grab
45	2-Chlorophenol	µg/L	Grab
46	2,4-Dichlorophenol	µg/L	Grab
47	2,4-Dimethylphenol	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	µg/L	Grab
49	2,4-Dinitrophenol	µg/L	Grab
50	2-Nitrophenol	µg/L	Grab
51	4-Nitrophenol	µg/L	Grab
52	3-Methyl-4-Chlorophenol	µg/L	Grab
53	Pentachlorophenol (PCP)	µg/L	Grab
54	Phenol	µg/L	Grab
55	2,4,6-Trichlorophenol	µg/L	Grab
56	Acenaphthene	µg/L	Grab
57	Acenaphthylene	µg/L	Grab
58	Anthracene	µg/L	Grab
59	Benzidine	µg/L	Grab
60	Benzo(a)Anthracene	µg/L	Grab
61	Benzo(a)Pyrene	µg/L	Grab
62	Benzo(b)Fluoranthene	µg/L	Grab
63	Benzo(ghi)Perylene	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
64	Benzo(k)Fluoranthene	µg/L	Grab
65	Bis(2-Chloroethoxy)Methane	µg/L	Grab
66	Bis(2-Chloroethyl)Ether	µg/L	Grab
67	Bis(2-Chloroisopropyl)Ether	µg/L	Grab
68	Bis(2-Ethylhexyl)Phthalate	µg/L	Grab
69	4-Bromphenyl Phenyl Ether	µg/L	Grab
70	Butylbenzyl Phthalate	µg/L	Grab
71	2-Chloronaphthalene	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	µg/L	Grab
73	Chrysene	µg/L	Grab
74	Dibenzo(a,h)Anthracene	µg/L	Grab
75	1,2-Dichlorobenzene	µg/L	Grab
76	1,3-Dichlorobenzene	µg/L	Grab
77	1,4-Dichlorobenzene	µg/L	Grab
78	3,3-Dichlorobenzidine	µg/L	Grab
79	Diethyl Phthalate	µg/L	Grab
80	Dimethyl Phthalate	µg/L	Grab
81	Di-n-Butyl Phthalate	µg/L	Grab
82	2,4-Dinitrotoluene	µg/L	Grab
83	2,6-Dinitrotoluene	µg/L	Grab
84	Di-n-Octyl Phthalate	µg/L	Grab
85	1,2-Diphenylhydrazine	µg/L	Grab
86	Fluoranthene	µg/L	Grab
87	Fluorene	µg/L	Grab
88	Hexachlorobenzene	µg/L	Grab
89	Hexachlorobutadiene	µg/L	Grab
90	Hexachlorocyclopentadiene	µg/L	Grab
91	Hexachloroethane	µg/L	Grab
92	Indeno(1,2,3-cd)Pyrene	µg/L	Grab
93	Isophorone	µg/L	Grab
94	Naphthalene	µg/L	Grab
95	Nitrobenzene	µg/L	Grab
96	N-Nitrosodimethylamine	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	µg/L	Grab
98	N-Nitrosodiphenylamine	µg/L	Grab
99	Phenanthrene	µg/L	Grab
100	Pyrene	µg/L	Grab
101	1,2,4-Trichlorobenzene	µg/L	Grab
102	Aldrin	µg/L	Grab
103	alpha-BHC (benzene hexachloride)	µg/L	Grab
104	beta-BHC (benzene hexachloride)	µg/L	Grab
105	gamma-BHC (benzene hexachloride or lindane)	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
106	delta-BHC (benzene hexachloride)	µg/L	Grab
107	Chlordane	µg/L	Grab
108	4,4'-DDT	µg/L	Grab
109	4,4'-DDE	µg/L	Grab
110	4,4'-DDD	µg/L	Grab
111	Dieldrin	µg/L	Grab
112	alpha-Endosulfan	µg/L	Grab
113	beta-Endolsulfan	µg/L	Grab
114	Endosulfan Sulfate	µg/L	Grab
115	Endrin	µg/L	Grab
116	Endrin Aldehyde	µg/L	Grab
117	Heptachlor	µg/L	Grab
118	Heptachlor Epoxide	µg/L	Grab
119-125	Polychlorinated Biphenyls (PCBs)	µg/L	Grab
126	Toxaphene	µg/L	Grab

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

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR 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.

   b. **Handheld Field Meter.** A handheld field meter may be used for **volume, flow, dissolved oxygen, electrical conductivity, temperature, total dissolved solids, turbidity**, 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.

   c. **Temperature** and **pH** shall be recorded at the time of **un-ionized ammonia** sample collection.

   d. **Aluminum.** Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria.

e. **Iron, Total, and Manganese, Total.** Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria.

f. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using **clean hands/dirty hands procedures**, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a **reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury**.

g. **Nitrate and Nitrite.** Monitoring for nitrite and nitrate shall be conducted concurrently.

h. **Priority Pollutants**. For all priority pollutant constituents listed in Table C-2 (Bis (2-ethylhexyl) phthalate, Persistent Chlorinated Hydrocarbon Pesticides and Priority Pollutants and Other Constituents of Concern) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3)and 122.44(i)(1)(iv).

i. **Bis (2-ethylhexl) phthalate**. In order to verify if bis (2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

j. **Persistent Chlorinated Hydrocarbon Pesticides** shall include: aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC or lindane), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4’DDD, 4,4’DDE, and 4,4’DDT.

k. **Polychlorinated Biphenyls (PCBs)**. Applies to the sum of PCB aroclors 1242, 1254, 1221, 1232, 1248, 1280, and 1016.

B. Discharges with Intake Water Credits

1. Influent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. If required, for every influent sample taken an effluent sample must also be taken.

2. If multiple water sources are used at the facility, including the receiving water, the flow of each water source must be measured to allow for calculation of flow-weighted influent concentration and mass values.

C. Petroleum Fuel Pollution Remediation Projects

1. Each Discharger shall monitor the influent groundwater from cleanup of petroleum fuel pollution at INF-001 in accordance with Table C-3 and the testing requirements described in section III.C.2 below. The NOA will specify which constituents must be monitored. Monitoring results are to be submitted in the self-monitoring reports (SMRs).

Table C-3. Influent Monitoring for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Sample Type	Minimum Sampling Frequency
Benzene	µg/L	Grab	1/Month
Ethylbenzene	µg/L	Grab	1/Month
1,2-Dichloroethane	µg/L	Grab	1/Month
Lead, Total	µg/L	Grab	1/Month
Naphthalene	µg/L	Grab	1/Month
Toluene	µg/L	Grab	1/Month
Di-isopropyl ether	µg/L	Grab	1/Month
Ethanol	µg/L	Grab	1/Month
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Methanol	µg/L	Grab	1/Month
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month
Tertiary Butyl Alcohol	µg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Diesel Range)	µg/l	Grab	1/Month
Xylene	µg/L	Grab	1/Month

2. **Table C-3 Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table C-3, as specified in the NOA:

   a. **Applicable to All Parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR 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.

   b. **Applicable to All Parameters (Except Lead, Total).** If these constituents are not present in any monitoring well or extraction well at the cleanup site, the monitoring well documentation may be submitted in lieu of the influent monitoring for these constituents. Confirmation samples on an annual basis shall be

submitted to verify the absence of these chemicals. If three consecutive monthly influent sampling events result in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to quarterly. If three consecutive quarterly sampling events results in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to annually. If a detectable concentration is determined to be present in the wastewater, the frequency will be monthly.

c. **Lead, Total.** If lead is not detected in the first two sampling events, then testing may be discontinued thereafter.

d. **Xylene.** Xylene includes o-xylene, m-xylene, and p-xylene.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. Each Discharger shall monitor the waste discharge at Monitoring Location EFF-001 in accordance with Table C-4 and the testing requirements described in section IV.A.2 below. The NOA will specify which constituents must be monitored regularly for each discharge point, the minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter), and where applicable, units and sample type. Monitoring results are to be submitted in the SMRs.

Table C-4. Effluent Monitoring

CTR Number	Parameter	Units	Sample Type
--	Volume, Total	Million Gallons (MG)	Known or Calculated
--	Discharge Flow Rate, Total	As specified in the NOA	As specified in the NOA
--	Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab
--	Total Suspended Solids	mg/L	Grab
--	Dissolved Oxygen	mg/L	Grab
--	Dissolved Organic Carbon	mg/L	Grab
--	Hardness, Total (as $CaCO_3$)	mg/L	Grab
--	pH	standard units	Grab
--	Temperature	°F	Grab
--	Electrical Conductivity @ 25°C	µmhos/cm	Grab
--	Total Dissolved Solids	mg/L	Grab
--	Settleable Solids	mL/L	Grab
--	Color	Color Units	Grab
--	Oil and Grease	mg/L	Grab
--	Turbidity	NTU	Grab
--	Total Coliform Organisms	MPN/100mL	Grab
--	Escherichia Coliform Organisms	MPN/100mL	Grab

CTR Number	Parameter	Units	Sample Type
--	Un-ionized Ammonia Nitrogen, Total as Nitrogen (N)	mg/L	Grab
--	Chlorine, Total Residual	mg/L	Grab
--	Acute Toxicity	% Survival	Grab
--	Chronic Toxicity	TUc	Grab
--	Foaming Agents (MBAS)	µg/L	Grab
--	Standard Minerals [8]	mg/L	Grab
--	Aluminum, Total	µg/L	Grab
--	Barium, Total	µg/L	Grab
--	Boron	mg/L	Grab
--	Chloride	mg/L	Grab
--	Chromium, Total	µg/L	Grab
--	Fluoride	µg/L	Grab
--	Iron, Total	µg/L	Grab
--	Manganese, Total	µg/L	Grab
--	Mercury, Methyl	ng/L	Grab
--	Molybdenum	µg/L	Grab
--	Nitrate Nitrogen, Total (as N)	mg/L	Grab
--	Nitrite (as N)	mg/L	Grab
--	Nitrate plus Nitrite (as N)	mg/L	Grab
--	Perchlorate	µg/L	Grab
--	Phosphorus, Total (as P)	mg/L	Grab
--	Sulfate	mg/L	Grab
--	Sulfide (as S)	mg/L	Grab
--	Sulfite (as SO_3)	mg/L	Grab
--	Tributyltin	µg/L	Grab
--	Alachlor	µg/L	Grab
--	Atrazine	µg/L	Grab
--	Bentazon	µg/L	Grab
--	Carbofuran	µg/L	Grab
--	Chlorpyrifos	µg/L	Grab
--	2,4-D	µg/L	Grab
--	2,4,5-TP (Silvex)	µg/L	Grab
--	Dalapon	µg/L	Grab
--	Diazinon	µg/L	Grab
--	Di(2-ethylhexyl)adipate	µg/L	Grab
--	Dinoseb	µg/L	Grab
--	Diquat	µg/L	Grab
--	Endothal	µg/L	Grab
--	Ethylene Dibromide (EDB)	µg/L	Grab
--	Methoxychlor	µg/L	Grab
--	Molinate (Ordram)	µg/L	Grab
--	Oxamyl	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
--	Picloram	µg/L	Grab
--	Simazine (Princep)	µg/L	Grab
--	Thiobencarb	µg/L	Grab
--	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	µg/L	Grab
--	1,2-Dichloroethene (cis and trans DCE)	µg/L	Grab
--	1,2-Dibromo-3-Chloropropane (DBCP)	µg/L	Grab
--	1,2,3-Trichloropropane (TCP)	µg/L	Grab
--	1,3-Butadiene	µg/L	Grab
--	1,3-Dichloropropene (cis and trans)	µg/L	Grab
--	2-Butanone (Methyl ethyl ketone or MEK)	µg/L	Grab
--	2-Chloroethylvinyl ether	µg/L	Grab
--	2-Hexanone (Methyl n-butyl ketone)	µg/L	Grab
--	3-Methyl-4-Chlorophenol	µg/L	Grab
--	Acetone	µg/L	Grab
--	Carbon Disulfide	µg/L	Grab
--	Chloromethane (Methyl chloride)	µg/L	Grab
--	MTBE (Methyl tertiary butyl ether)	µg/L	Grab
--	Stoddard Solvent	µg/L	Grab
--	Styrene	µg/L	Grab
--	Trichlorofluoromethane (Freon 11)	µg/L	Grab
--	Xylenes	µg/L	Grab
1	Antimony, Total	µg/L	Grab
2	Arsenic, Total	µg/L	Grab
3	Beryllium, Total	µg/L	Grab
4	Cadmium, Total	µg/L	Grab
5a	Chromium (III)	µg/L	Grab
5b	Chromium (VI)	µg/L	Grab
6	Copper, Total	µg/L	Grab
7	Lead, Total	µg/L	Grab
8	Mercury, Total	µg/L	Grab
9	Nickel, Total	µg/L	Grab
10	Selenium, Total	µg/L	Grab
11	Silver, Total	µg/L	Grab
12	Thallium, Total	µg/L	Grab
13	Zinc, Total	µg/L	Grab
14	Cyanide, Total (as CN)	µg/L	Grab
15	Asbestos	MFL	Grab
16	2,3,7,8-TCDD	µg/L	Grab
17	Acrolein	µg/L	Grab
18	Acrylonitrile	µg/L	Grab
19	Benzene	µg/L	Grab
20	Bromoform	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
21	Carbon Tetrachloride (Freon 10)	µg/L	Grab
22	Chlorobenzene	µg/L	Grab
23	Chlorodibromomethane	µg/L	Grab
24	Chloroethane	µg/L	Grab
25	2-Chloroethylvinyl Ether	µg/L	Grab
26	Chloroform	µg/L	Grab
27	Dichlorobromomethane	µg/L	Grab
28	1,1-Dichloroethane (DCA)	µg/L	Grab
29	1,2-Dichloroethane (DCA)	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	µg/L	Grab
31	1,2-Dichloropropane	µg/L	Grab
32	1,3-Dichloropropylene	µg/L	Grab
33	Ethylbenzene	µg/L	Grab
34	Methyl Bromide (Bromomethane)	µg/L	Grab
35	Methyl Chloride (Chloromethane)	µg/L	Grab
36	Methylene Chloride (Dichloromethane)	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	µg/L	Grab
38	Tetrachloroethylene (PCE)	µg/L	Grab
39	Toluene	µg/L	Grab
40	1,2-Trans-Dichloroethylene (DCE)	µg/L	Grab
41	1,1,1-Trichloroethane (TCA)	µg/L	Grab
42	1,1,2-Trichloroethane (TCA)	µg/L	Grab
43	Trichloroethylene (TCE)	µg/L	Grab
44	Vinyl Chloride (Chloroethene)	µg/L	Grab
45	2-Chlorophenol	µg/L	Grab
46	2,4-Dichlorophenol	µg/L	Grab
47	2,4-Dimethylphenol	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	µg/L	Grab
49	2,4-Dinitrophenol	µg/L	Grab
50	2-Nitrophenol	µg/L	Grab
51	4-Nitrophenol	µg/L	Grab
52	3-Methyl-4-Chlorophenol	µg/L	Grab
53	Pentachlorophenol (PCP)	µg/L	Grab
54	Phenol	µg/L	Grab
55	2,4,6-Trichlorophenol	µg/L	Grab
56	Acenaphthene	µg/L	Grab
57	Acenaphthylene	µg/L	Grab
58	Anthracene	µg/L	Grab
59	Benzidine	µg/L	Grab
60	Benzo(a)Anthracene	µg/L	Grab
61	Benzo(a)Pyrene	µg/L	Grab
62	Benzo(b)Fluoranthene	µg/L	Grab
63	Benzo(ghi)Perylene	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
64	Benzo(k)Fluoranthene	µg/L	Grab
65	Bis(2-Chloroethoxy)Methane	µg/L	Grab
66	Bis(2-Chloroethyl)Ether	µg/L	Grab
67	Bis(2-Chloroisopropyl)Ether	µg/L	Grab
68	Bis(2-Ethylhexyl)Phthalate	µg/L	Grab
69	4-Bromphenyl Phenyl Ether	µg/L	Grab
70	Butylbenzyl Phthalate	µg/L	Grab
71	2-Chloronaphthalene	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	µg/L	Grab
73	Chrysene	µg/L	Grab
74	Dibenzo(a,h)Anthracene	µg/L	Grab
75	1,2-Dichlorobenzene	µg/L	Grab
76	1,3-Dichlorobenzene	µg/L	Grab
77	1,4-Dichlorobenzene	µg/L	Grab
78	3,3-Dichlorobenzidine	µg/L	Grab
79	Diethyl Phthalate	µg/L	Grab
80	Dimethyl Phthalate	µg/L	Grab
81	Di-n-Butyl Phthalate	µg/L	Grab
82	2,4-Dinitrotoluene	µg/L	Grab
83	2,6-Dinitrotoluene	µg/L	Grab
84	Di-n-Octyl Phthalate	µg/L	Grab
85	1,2-Diphenylhydrazine	µg/L	Grab
86	Fluoranthene	µg/L	Grab
87	Fluorene	µg/L	Grab
88	Hexachlorobenzene	µg/L	Grab
89	Hexachlorobutadiene	µg/L	Grab
90	Hexachlorocyclopentadiene	µg/L	Grab
91	Hexachloroethane	µg/L	Grab
92	Indeno(1,2,3-cd)Pyrene	µg/L	Grab
93	Isophorone	µg/L	Grab
94	Naphthalene	µg/L	Grab
95	Nitrobenzene	µg/L	Grab
96	N-Nitrosodimethylamine	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	µg/L	Grab
98	N-Nitrosodiphenylamine	µg/L	Grab
99	Phenanthrene	µg/L	Grab
100	Pyrene	µg/L	Grab
101	1,2,4-Trichlorobenzene	µg/L	Grab
102	Aldrin	µg/L	Grab
103	alpha-BHC (benzene hexachloride)	µg/L	Grab
104	beta-BHC (benzene hexachloride)	µg/L	Grab
105	gamma-BHC (benzene hexachloride or lindane)	µg/L	Grab

CTR Number	Parameter	Units	Sample Type
106	delta-BHC (benzene hexachloride)	µg/L	Grab
107	Chlordane	µg/L	Grab
108	4,4'-DDT	µg/L	Grab
109	4,4'-DDE	µg/L	Grab
110	4,4'-DDD	µg/L	Grab
111	Dieldrin	µg/L	Grab
112	alpha-Endosulfan	µg/L	Grab
113	beta-Endolsulfan	µg/L	Grab
114	Endosulfan Sulfate	µg/L	Grab
115	Endrin	µg/L	Grab
116	Endrin Aldehyde	µg/L	Grab
117	Heptachlor	µg/L	Grab
118	Heptachlor Epoxide	µg/L	Grab
119-125	Polychlorinated Biphenyls (PCBs)	µg/L	Grab
126	Toxaphene	µg/L	Grab

2. **Table C-4 Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table C-4:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR 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.

   b. **Handheld Field Meter.** A handheld field meter may be used for **volume, flow, dissolved oxygen, hardness, electrical conductivity, temperature, total dissolved solids, total residual chlorine, turbidity**, 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.

   c. **Hardness** samples shall be collected concurrently with effluent sampling for cadmium, chromium (III), copper, lead, nickel, silver, and/or zinc if effluent sampling for any of these pollutants is required.

   d. **Temperature** and **pH** shall be recorded at the time of **un-ionized ammonia** sample collection.

   e. If **un-ionized ammonia** monitoring is required, samples shall be collected concurrently with whole effluent toxicity monitoring.

   f. **Total Residual Chlorine** must be monitored using an analytical method that is sufficiently sensitive to measure at the permitted level of 0.1 mg/L.

h. **Whole Effluent Toxicity.** See the MRP (Attachment C, section V, below) for toxicity monitoring requirements.

i. **Aluminum.** Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria.

j. **Iron, Total, and Manganese, Total.** Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria.

k. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using **clean hands/dirty hands procedures**, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a **reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury**.

l. **Nitrate and Nitrite.** Monitoring for nitrite and nitrate shall be conducted concurrently.

m. **Chlorpyrifos and Diazinon** shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than the Basin Plan Water Quality Objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

n. **Priority Pollutants**. For all priority pollutant constituents listed in Table C-4 (Bis (2-ethylhexyl) phthalate, Persistent Chlorinated Hydrocarbon Pesticides and Priority Pollutants and Other Constituents of Concern) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3)and 122.44(i)(1)(iv).

o. **TCDD-Dioxin Congener Equivalents** shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP.

p. **Bis (2-ethylhexl) phthalate**. In order to verify if bis (2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

q. **Persistent Chlorinated Hydrocarbon Pesticides** shall include: aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC or lindane), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

r. **Polychlorinated Biphenyls (PCBs)**. Applies to the sum of PCB aroclors 1242, 1254, 1221, 1232, 1248, 1280, and 1016.

B. Monitoring Location EFF-002 and Additional Monitoring Locations:

All dischargers with more than one discharge location shall be required to monitor all discharge locations as described above in Table C-4 and as specified in the NOA.

C. Effluent Monitoring for Facilities with Intake Water Credits

Effluent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. If required, for every effluent sample taken an influent sample must also be taken.

D. Effluent Monitoring for Petroleum Fuel Pollution Remediation Projects

1. For discharges from petroleum fuel pollution cleanup projects, effluent samples shall be collected at EFF-001 and analyzed in accordance with Table C-5 and the testing requirements described in section IV.D.2 below. The NOA will specify which constituents must be monitored regularly for each discharge point, the minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter), and where applicable, units and sample type. Monitoring results are to be submitted in the SMRs.

Table C-5. Effluent Monitoring for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	GPD	Estimate	1/Day
pH	standard units	Grab	1/Month
Benzene	µg/L	Grab	1/Month
Ethylbenzene	µg/L	Grab	1/Month
1,2-Dichloroethane	µg/L	Grab	1/Month
Lead, Total	µg/L	Grab	1/Month
Naphthalene	µg/L	Grab	1/Month
Toluene	µg/L	Grab	1/Month
Carcinogenic PAHs	µg/L	Grab	1/Month

Parameter	Units	Sample Type	Minimum Sampling Frequency
Di-isopropyl Ether	µg/L	Grab	1/Month
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month
Ethanol	µg/L	Grab	1/Month
Ethylene Dibromide	µg/L	Grab	1/Month
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Hardness (as $CaCO_3$)	mg/L	Grab	1/Month
Methanol	µg/L	Grab	1/Month
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month
Temperature	°F	Grab	1/Month
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month
Tertiary Butyl Alcohol	µg/L	Grab	1/Month
Total Dissolved Solids	mg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	Grab	1/Month
Xylene	µg/L	Grab	1/Month
Whole Effluent Toxicity (see Section V. below)	--	--	--

2. **Table C-5 Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table C-5:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR 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.

   b. **Flow.** Flow shall be measured when discharging to surface water.

   c. **Applicable to All Parameters (Except Flow, Electrical Conductivity, pH, Temperature, Total Dissolved Solids, and Whole Effluent Toxicity).**

      i. Analysis shall be conducted weekly for 4 consecutive weeks following initial discharge from the treatment system.

      ii. If any sample shows detectable concentrations, the Discharger shall immediately resample and reanalyze the effluent for the detected constituent(s), and shall continue sampling the effluent on a weekly basis until the constituent(s) concentrations are below permitted levels.

iii. If three consecutive monthly sampling events result in non-detectable concentrations, at appropriate detection limits, then the sampling frequency shall be reduced to quarterly.

iv. If a detectable concentration is determined to be present in the wastewater the frequency will revert back to monthly.

v. Subsequent to the initial testing required in i above, if a constituent is not present in the influent sample, then the testing for that constituent may be discontinued until detected in the influent.

d. **Priority Pollutants (Benzene, Ethylbenzene, 1,2-Dichloroethane, Lead, Total, Naphthalene, Toluene)**. For all priority pollutant constituents listed in Table C-5 (Bis [2-ethylhexyl] phthalate, Persistent Chlorinated Hydrocarbon Pesticides and Priority Pollutants and Other Constituents of Concern) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3)and 122.44(i)(1)(iv).

e. **Lead, Total.** If lead is not detected in the first two sampling events, then testing may be discontinued thereafter.

f. **Carcinogenic PAHs** include: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluroanthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

g. **Hardness** samples shall be collected concurrently with effluent sampling for cadmium, chromium (III), copper, lead, nickel, silver, and/or zinc if effluent sampling for any of these pollutants is required.

h. **Xylene** includes o-xylene, m-xylene, and p-xylene.

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. Chronic Toxicity Testing. Discharges greater than or equal to 120 days in duration, 0.25 MGD in volume, of liquid mine waste, or with treatment shall conduct chronic toxicity testing as specified in the NOA to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. **Routine Monitoring Frequency** – Discharges greater than or equal to 120 days in duration, 0.25 MGD in volume, of liquid mine waste, or with treatment shall conduct routine chronic toxicity testing once per calendar year in years in which there are at least 15 days of discharge in at least one calendar quarter or as directed by the

Executive Officer in the NOA. Discharges less than 120 days and 0.25 MGD will not be required to conduct chronic toxicity testing.

2. **Sample Types** – Effluent samples shall grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001 and any other effluent discharge location specified in the NOA.

3. **Sample Volumes** – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. **Test Species** – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct three species chronic toxicity tests with:

   The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);

   The fathead minnow, *Pimephales promelas* (larval survival and growth test); and

   The green alga, *Pseudokirchneriella subcapitata* (growth test).

5. **Test Methods** – The presence of chronic toxicity shall be estimated as specified in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002.

6. **Reference Toxicant** – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. **Dilutions** – For routine and accelerated chronic toxicity monitoring, the test shall be performed using the dilution series identified in Table C-6, below. A receiving water control or laboratory water control may be used as the diluent.

Table C-6. Chronic Toxicity Dilution Series

Samples	Dilution %	Dilution %	Dilution %	Dilution %	Dilution %	Dilution %	Controls
% Effluent	100	75	50	25	12.5	6.25	0
% Control Water	0	25	50	75	87.5	93.75	100

8. **Test Failure** – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:

   a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition,

EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or

b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. A retest is only required in this case if the test results do not exceed the monitoring trigger specified in the Special Provision at section IX.C.2.b.i. of the Order.

B. WET Testing Notification Requirements. Each Discharger shall notify the Central Valley Water Board within 24-hours after the receipt of test results exceeding the monitoring trigger during regular monitoring.

C. WET Testing Reporting Requirements. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Central Valley Water Board in the quarterly SMR, and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

   d. The dates of sample collection and initiation of each toxicity test; and

   e. The results compared to the numeric toxicity monitoring trigger.

2. **Quality Assurance (QA).** Each Discharger must provide the following information for QA purposes:

   a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

   c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001, RSW-002, and all additional locations

1. Each Discharger shall monitor the upstream and downstream receiving water at Monitoring Locations RSW-001, RSW-002, and all additional locations, as specified in the NOA, in accordance with Table C-7 and the testing requirements described in section VIII.A.2 below. The NOA will specify which constituents must be monitored regularly for in the receiving water, the minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter), and where applicable, units and sample type, if required. Monitoring results are to be submitted in the SMRs.

Table C-7. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type
pH	standard units	Grab
Dissolved Oxygen	mg/L	Grab
Electrical Conductivity @ 25°C	µmhos/cm	Grab
Hardness, Total (as $CaCO_3$)	mg/L	Grab
Temperature	°F	Grab
Turbidity	NTU	Grab
Aluminum, Total	µg/L	Grab
Aluminum, Dissolved	µg/L	Grab
Phosphorous, Total	mg/L	Grab
Dissolved Organic Carbon	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Un-ionized Ammonia Nitrogen, Total (as N)	mg/L	Grab

2. **Table C-7 Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table C-7:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR 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.

   b. **Handheld Field Meter.** A handheld field meter may be used for **dissolved oxygen, electrical conductivity, temperature, turbidity**, 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.

3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001, RSW-002, and all additional locations as specified in the NOA when discharging to the receiving water. Attention shall be given to the presence 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; and

   g. Potential nuisance conditions.

   Notes on receiving water conditions shall be summarized in the monitoring report.

IX. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. New Dischargers who have received a NOA for coverage under this General Order shall inform the Central Valley Water Board 24 hours before the start of the discharge.

2. Before commencing a new discharge, a representative sample of the effluent or representative samples of the receiving waters, as applicable, shall be collected and analyzed for all the constituents identified in Table I-1, compared with the appropriate screening levels, and submitted with the NOI.

3. Authorized Dischargers shall comply with all Standard Provisions (Attachment B) related to monitoring, reporting, and recordkeeping.

4. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

5. Monitoring reports shall be submitted to the Central Valley Water Board each quarter. In situations where no effluent monitoring is required, the frequency for submitting monitoring reports may be reduced to annually in the NOA. If no discharge occurred during the reporting period, the monitoring report shall document that there was no discharge.

6. **Compliance Time Schedules**. For compliance time schedules included in the NOA, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State Water Board or the Central Valley Water Board may notify enrolled Dischargers to electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). Until such notification is given, each Discharger shall electronically submit SMRs as described in the NOA.

2. Dischargers shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX and the NOA. Dischargers shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this General Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this General Order and as specified in the NOA, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Quarterly SMRs are required even if there is no discharge. If no discharge occurs during the monitoring period, the monitoring report must be submitted stating that there has been no discharge.

   a. In situations where no effluent monitoring is required, the frequency for submitting SMRs may be reduced to annually in the NOA. Unless otherwise specified in the NOA, annual SMRs are due 1 February and include monitoring data for 1 January through 31 December for the previous calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table C-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
1/Discharge Event	NOA effective date	All	1 May 1 August 1 November 1 February of following year

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	NOA effective date	All	1 May 1 August 1 November 1 February of following year
1/Hour	NOA effective date	Hourly	1 May 1 August 1 November 1 February of following year
1/Day	NOA effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	1 May 1 August 1 November 1 February of following year
1/Week	NOA effective date	Sunday through Saturday	1 May 1 August 1 November 1 February of following year
1/Month	NOA effective date	1st day of calendar month through last day of calendar month	1 May 1 August 1 November 1 February of following year
1/Quarter	NOA effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February of following year
2/Year	NOA effective date	1 January through 30 June 1 July through 31 December	1 August 1 February of following year
1/Year	NOA effective date	1 January through 31 December	1 February of following year

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current laboratory's Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

   Dischargers shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the Minimum Level (ML) value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time are Dischargers to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Multiple Sample Data**. When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

6. **The Discharger shall submit SMRs** in accordance with the following requirements:

   a. Each Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. Dischargers are not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does

not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. Each Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. Each Discharger shall attach all final laboratory reports from all contracted commercial laboratories, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed.

7. Each Discharger shall submit in the SMRs calculations and reports in accordance with the following requirements:

a. **Calendar Annual Average Limitations or Triggers**. For constituents with effluent limitations or triggers specified as “calendar annual average” (electrical conductivity) the Discharger shall report the calendar annual average in the Fourth Quarter SMR. The annual average shall be calculated as the average of the samples gathered for the calendar year.

b. **Dissolved Oxygen Receiving Water Limitations**. The Discharger shall report monthly in the self-monitoring report the dissolved oxygen concentrations in the effluent (EFF-001 and any other effluent discharge location) and the receiving water (Monitoring Location RSW-001 and RSW-002 and any other upstream and downstream receiving water monitoring locations).

c. **Turbidity Receiving Water Limitations**. The Discharger shall calculate and report the turbidity increase in the receiving water applicable to the natural turbidity condition specified in section V.A.18.a-e. of the Waste Discharge Requirements at Monitoring Locations RSW-001 and RSW-002 and any other upstream and downstream receiving water monitoring locations.

d. **Temperature Receiving Water Limitations**. The Discharger shall calculate and report the temperature increase in the receiving water based on the difference in temperature at Monitoring Locations RSW-001 and RSW-002 and any other upstream and downstream receiving water monitoring locations.

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports

1. **Salinity Evaluation and Minimization Plan.** Dischargers with projects greater than or equal to 180 days in length shall submit a Salinity Evaluation and Minimization Plan within 60 days of initiating a new discharge under this general Order, to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the discharger will minimize any increase in

effluent salinity as the result of treatment of the wastewater, if applicable. Under limited circumstances the Executive Officer may waive this requirement in the NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.

2. **Pollution Prevention and Monitoring and Reporting Plan.** Drinking water suppliers that have or propose to have numerous discharge points covered by this general order are required to develop a site-specific Pollution Prevention and Monitoring and Reporting Plan (PPMRP) and submit the document with the Notice of Intent. The information required for the PPMRP is shown in Attachment F.

3. **Best Management Practices (BMP) Plan.** Dischargers authorized under this General Order shall develop and implement BMPs, as specified in the NOA, that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of additional pollutants from the discharge facility to waters of the State. These BMP requirements are not automatically required for Dischargers without treatment. However, when appropriate the Executive Officer may require the BMP requirements for Dischargers without treatment in the NOA. The BMPs shall be consistent with the general guidance contained in the U.S. EPA Guidance Manual for Developing BMP (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed that will ensure proper operation and maintenance, prevent the additional chemicals or other substances from being introduced into the discharge, and prevent the addition of pollutants from the other non-permitted process waters, spills, or other sources of pollutants at the discharge facility. The necessary BMPs shall be identified, developed, and implemented prior to the initiation of the discharge. Each Discharger shall update and amend the BMP Plan as necessary to maintain compliance with this General Order. By the date that discharge begins, each Discharger shall make the BMP Plan available to Central Valley Water Board staff upon request.

4. **Closure Certification for Discharges from Drinking Water Supply Systems.** If a drinking water supply system Discharger received an exception as allowed by section 5.3 of the SIP, then upon termination of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Closure Certification is to be submitted with the request for termination.

5. **Alum Application Plan (AAP).** Dischargers applying alum for phosphorous sequestration need to complete an AAP as required in Sections V.B.6 and IX.C.6.b and described in Attachment K.

ATTACHMENT D – FACT SHEET

Table of Contents

Tables

ATTACHMENT D – FACT SHEET

As described in section III.C of this General Order, the Central Valley Water Board incorporates this Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this General Order. This Fact Sheet discusses the legal requirements and technical rationale that serve as the basis for the requirements of this General Order.

This General Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this General Order that are specifically identified as "not applicable" have been determined not to apply to the Dischargers. Sections or subsections of this General Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

A. Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

On 22 September 1989, the United States Environmental Protection Agency (U.S. EPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue general NPDES permits pursuant to 40 Code of Federal Regulations (C.F.R.) parts 122 and 123.

40 C.F.R. 122.28 provides for issuance of general permits to regulate a category of point sources if the sources involve the same or substantially similar types of operations; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general order rather than individual orders.

B. General Criteria

This Limited Threat General NPDES Order is designed to allow limited threat waste discharges to surface waters or surface water drainage courses as long as the discharge does not include human waste and is able to meet all effluent limitations and discharge prohibitions. Surface waters or surface water drainage courses include but are not limited to streams, dry stream courses, ephemeral streams, creeks, rivers, lakes, reservoirs, and storm drains. Although the primary focus of the Central Valley Water Board is water quality, the program deals with all environments, including surface water, groundwater, soil, sediment, the vadose zone, and air. Discharges may be clean or relatively clean wastewater projects and include but are not limited to well development, construction dewatering, pump/well testing, pipeline pressure testing, pipeline flushing or dewatering, condensate, water supply

systems, aggregate mines, and filter backwash or discharges that require treatment prior to discharge and include but are not limited to discharges that may contain low levels of toxic organic constituents, volatile organic compounds (VOCs), petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and other chemical constituents that require treatment prior to discharge such as industrial facilities, dry cleaners, pipeline leaks and spills, underground tanks, aboveground tank farms, petroleum fuel pollution groundwater remediation projects, pesticide and fertilizer facilities, superchlorination projects, equipment decontamination, and brownfields. Discharges may also be liquid mine waste from mines with or without treatment.

II. FACILITY DESCRIPTION

Eligible Discharges. This Limited Threat General Order applies to individuals, public agencies, private businesses, and other legal entities (hereafter Dischargers) discharging limited threat wastewaters to waters of the United States as follows:

A. Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality.

1. Well development water
2. Construction dewatering
3. Pump/well testing
4. Pipeline pressure testing
5. Pipeline flushing or dewatering
6. Condensate
7. Water supply systems
8. Aggregate mines
9. Filter backwash
10. Ambient streamflow augmentation
    a. The sole purpose is to augment ambient streamflow conditions to support aquatic organisms during times of low streamflows where conditions threaten survival of aquatic organisms.
11. Alum application for phosphorous sequestration
    a. Application of alum to surface water is intended to address harmful algal blooms by reducing phosphorus concentrations. Alum binds with phosphorus

and settles out of the water column. When properly applied, alum application poses little or no threat to water quality. Consistent with the Clean Water Act, while the alum itself when applied to receiving water for phosphorous sequestration is not a pollutant, any residual or excess from the application constitutes a pollutant requiring an NPDES permit.

12. Miscellaneous wastewaters without a treatment system

B. Wastewater that may contain toxic organic constituents, volatile organic compounds (VOCs), pesticides, inorganic constituents, chlorine, and other chemical constituents for which treatment technologies are well-established to eliminate constituents that pose a threat to water quality and that require treatment prior to discharge.

Filter bags or other filtration units for removal/reduction of turbidity may or may not be considered treatment by the Executive Officer. Wastewaters that may be covered under this General Order include but are not limited to the following:

1. Superchlorination projects;

2. Equipment decontamination projects;

3. Wastewater from groundwater cleanup sites including industrial facilities, dry cleaners, pipeline leaks and spills, underground tanks, aboveground tank farms, petroleum fuel pollution, pesticide and fertilizer facilities, and brownfields;

4. Hydroelectric power project discharges;

5. Miscellaneous discharges that do not meet effluent limitations without treatment.

C. Mines often discharge to surface waters. Treatment is often required prior to discharge. Drainage from mines with or without treatment may be covered under this General Order.

III. NOTIFICATION REQUIREMENTS

A. **Requirements for All Discharges**. All Dischargers enrolling for coverage under this General Order are required to submit a complete Notice of Intent (NOI), as detailed in Attachment J, which includes:

1. State Water Board Form 200.

2. A full description of the proposed project on official letterhead.

3. A project map which includes the location of the project, discharge point(s), and receiving water.

4. The appropriate first annual fee.

California Water Code section 13260(d) requires each person for whom waste discharge requirements (WDRs) are issued to pay an annual fee to the State Water Board. California Water Code section 13260(f) requires: (1) the State Water Board to adopt a schedule of fees by emergency regulation; and (2) fees to be adjusted annually to conform to the revenue levels set forth in the State Budget Act for the activities that have been issued WDRs.

The fee for enrollment under this Order for discharges that require minimal or no treatment systems to meet limits and their only purpose is to augment ambient streamflow conditions to support aquatic organisms during times of low streamflows where conditions threaten survival of aquatic organisms shall be based on Category 4 in section 2200(b)(10) of title 23, California Code of Regulations. The fee for all other enrollments under this Order shall be based on Category 3 in section 2200(b)(10) of title 23, California Code of Regulations. Checks must be made payable to the State Water Resources Control Board. The current fee schedule is available on the Water Quality Fees Webpage (https://www.waterboards.ca.gov/resources/fees/water_quality/) under NPDES Permits.

5. Discharge Type from the following list:

   a. Well Development Water, which includes discharges associated with supply well installation, development, test pumping and purging;

   b. Construction Dewatering;

   c. Pump/Well Testing, which includes discharges associated with the operation and maintenance activities of existing pumps and wells;

   d. Water Supply System, which include discharges associated with fire hydrant flushes and system operation, maintenance, and testing activities of a water supply system;

   e. Pipeline/Tank Pressure Testing, which includes discharges associated with hydrostatic testing;

   f. Pipeline/Tank Flushing or Dewatering, which includes discharges associated with flushing, cleaning, and disinfection;

   g. Condensate, which includes discharges associated with atmospheric condensates such as refrigeration, air conditioners, and compressor condensates and cooling towers;

   h. Filter Backwash waters;

   i. Aggregate Mine, which includes sediment-laden wastewaters;

   j. Groundwater Extraction and/or Cleanup Project;

k. Superchlorination;

l. Equipment Decontamination;

m. Wastewater from Groundwater Cleanup Site;

n. Liquid mine waste;

o. Petroleum fuel pollution remediation projects;

p. Hydroelectric power project; or

q. Ambient streamflow augmentation

r. Alum application for phosphorous sequestration

s. Other

6. Evaluation of disposal/reclamation options:

Pursuant to section 2, Article X, California Constitution, and Water Code section 275, on preventing waste and unreasonable use of waters of the state, the Central Valley Water Board encourages, wherever practicable, water conservation and/or re-use of wastewater. Therefore, to obtain coverage under this General Order, Dischargers are required to evaluate their reclamation options. These options include:

a. Sanitary Sewage System

If all the discharge is accepted by the local municipal wastewater treatment plant (WWTP), then authorization to discharge under an NPDES permit is not needed for the proposed project. Dischargers may submit any denial or restrictive flow letter from the WWTP as proof that this option is not viable or explain why it is infeasible to connect to the WWTP.

b. Land Disposal

The land disposal option is usually restricted to the dry season (May through October) unless the Discharger can prove that the discharge can be retained on land during the wet season (November through April). All Dischargers must fully explain why land disposal is not a viable option.

c. Underground Injection

This option may be available for Dischargers at cleanup sites that find it is economically infeasible to treat the groundwater prior to discharging into surface waters that may be impacted by constituents that are found in impacted areas (e.g., sites discharging to 303(d) listed receiving waters). Additional information

regarding the feasibility of underground injection as a disposal option can be obtained from the U.S. EPA Region 9 Office, Underground Injection Control Unit.

7. Analytical results of sampling of the effluent or receiving water, as applicable, for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged;

   a. New Discharges. Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a NOA to the Discharger. The NOA will specify that the discharge is authorized under the terms and conditions of this General Order and will prescribe effluent limitations where necessary and include a monitoring and reporting program. New discharges that are not covered by an existing individual or general NPDES permit may not commence discharging until issuance of a NOA. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

   New analytical results must be submitted every 5 years or less from the date of the NOA and every 5 years after that, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged. For Dischargers applying alum for phosphorous sequestration, updated baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

   This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a NOA from the Executive Officer.

   b. Existing Discharges. Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2016-0076-01 (NPDES Permit CAG995002) are automatically authorized under this General Order to continue discharging.

   New analytical results for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged must be submitted every 5 years or less from the effective date of the current NOA. Those dischargers that last submitted analytical results specified in Table I-1 of Attachment I more than 5 years ago must submit updated data with an acceptable NOI within 180 days of the effective date of this Order. For Dischargers applying alum for phosphorous sequestration, updated baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

   Upon submittal of an acceptable NOI, the Executive Officer will issue a revised NOA to existing enrollees that coverage under the General Order will continue, specifying any new and continuing effluent limitations and a monitoring and

reporting program. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

8. Certification by authorized personnel

B. Additional Requirements for Specific Discharges. Additional NOI submittal requirements are included for specific dischargers:

1. Salinity Evaluation and Minimization Plan. Dischargers with projects greater than or equal to 180 days in duration shall submit and implement a Salinity Evaluation and Minimization Plan to identify and address sources of salinity discharged from the Facility. The plan shall be completed and submitted to the Central Valley Water Board by the due date in the NOA. Under limited circumstances when groundwater is naturally high in salinity and source control is infeasible, for example construction dewatering projects, the requirement to submit a Salinity Evaluation and Minimization Plan may not be specified in the NOA.

2. Impaired waterbodies. Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 11 October 2011 U.S. EPA gave final approval to California's 2008-2010 section 303(d) List of Water Quality Limited Segments. The Basin Plans reference this list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources* (40 C.F.R. part 130, et seq.)." The Basin Plans also state, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." Impaired waters do not fully support beneficial uses. If proposing to discharge into an impaired surface water, the Discharger must provide wastewater analysis of the 303(d) listed constituents of concern as part of the Notice of Intent.

The list of impaired surface waters can be found under the CWA section 303(d) List (http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list).

Additional requirements include:

a. Analytical results of sampling of the proposed receiving water and effluent for pollutants causing impairment under CWA section 303(d) List, if applicable.

b. Demonstration of adequate treatment to ensure compliance at the point of discharge (i.e., end-of-pipe).

i. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations;

ii. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer; and

iii. Analytical results of sampling of the treated effluent for the applicable pollutants with effluent limitations specified in the NOA;

3. **Drinking water supply systems.** Categorical Exception for Priority Pollutant Criteria and Objectives.

a. As discussed in section II.A.2.b of this General Order, section 5.3 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) allows the Central Valley Water Board to allow certain Dischargers short-term or seasonal exceptions from meeting priority pollutant criteria and objectives for discharges that are necessary to implement control measures that fulfill statutory requirements regarding drinking water. Dischargers applying for a categorical exception to the priority pollutant criteria and objectives as authorized by section 5.3 of the SIP must submit the appropriate requirements with the application as specified by the SIP, including:

i. A detailed description of the proposed action, including the proposed method of completing the action;

ii. A time schedule;

iii. A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures);

iv. CEQA documentation;

v. Contingency plans;

vi. Identification of alternate water supply (if needed); and

vii. Residual waste disposal plans.

b. A Pollution Prevention and Monitoring and Reporting Plan (PPMRP), as outlined in Attachment F, if the project includes more than one existing or proposed discharge point.

c. Upon completion of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Certification must be submitted with the Request for Termination of Coverage form in Attachment E.

4. **Intake Water Credit.** When the water intake from the receiving water is the major source of the pollutants and is responsible for the reasonable potential to exceed applicable water quality standards, an intake water credit can be granted in accordance with section 1.4.4 of the Policy for Implementation of the Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries in California (SIP). When an Intake Water Credit has been granted for a specific pollutant by the Executive Officer in the NOA, then treatment for that pollutant is not required.

   A Discharger must submit a written request for an intake water credit. The written request must be prepared in accordance with the NOI requirements in Attachment G and as specified in Attachment J, section 10. The Executive Officer of the Central Valley Water Board will decide whether to authorize the intake water credit, based on the monitoring data included with the NOI and other information submitted by the Discharger, and the requirements specified in the SIP, section 1.4.4.

   The SIP, section 1.4.4 specifies that a California Water Board may consider an intake water credit on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water-quality based effluent limitations, provided that the Discharger satisfactorily demonstrates that the following conditions are met:

   a. The observed maximum ambient background concentrations, as determined in section 1.4.3.1 of the SIP, and the intake water concentration of the pollutant exceed the most stringent applicable criterion/objective for the pollutant;

   b. The intake water credits are consistent with any TMDL applicable to the discharge that has been approved by the Central Valley Water Board, the State Water Resources Control Board, and U.S. EPA;

   c. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing:

      i. the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to the that of the intake water;

      ii. there is direct hydrological connection between the intake and discharge points;

      iii. the water quality characteristics are similar in the intake and receiving waters; and

      iv. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

      The Central Valley Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

d. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and

e. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water.

5. **Wastewater that requires treatment prior to discharge.**

a. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations; and

b. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.

6. **Alum application for the sequestration of phosphorous.**
An Alum Application Plan (AAP) as described in Attachment K must be submitted with the NOI package for Dischargers applying alum for the sequestration of phosphorous. The AAP may be used to fulfill the requirements of the NOI's Project Description as described above in Section III.A.2 of this attachment.

IV. GENERAL ORDER

A. New Discharges

Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a NOA to the Discharger. The NOA will specify that the discharge is authorized under the terms and conditions of this General Order and will prescribe effluent limitations and include a monitoring and reporting program. New discharges that are not covered by an existing individual or general NPDES permit may not commence until issuance of a NOA. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

New analytical results must be submitted every 5 years from the date of the NOA, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged. For Dischargers applying alum for phosphorous sequestration, updated baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a NOA from the Executive Officer.

B. Existing Discharges

Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2016-0076-01 (NPDES Permit CAG995002) are automatically authorized under this General Order to continue discharging.

New analytical results for the pollutants specified Table I-1 of Attachment I for the type of wastewater discharged must be submitted every 5 years or less from the date of the current NOA. Those dischargers that last submitted the suite of analytical results specified in Table I-1 of Attachment I more than 5 years ago must submit updated data with an acceptable NOI within 180 days of effective date of this Order. For Dischargers applying alum for phosphorous sequestration, updated baseline monitoring sampling shall be performed as specified in Table I-1 of Attachment I within 5 years of the last baseline monitoring sampling.

Upon submittal of an acceptable NOI, the Executive Officer will provide a new NOA to existing enrollees that coverage under the General Order will continue, specifying any new and continuing effluent limitations and a monitoring and reporting program. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

C. **Changes in Discharge/Coverage**

Some permanent changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the NOA by the Executive Officer.

1. Notify the Executive Officer 60 days prior to planned or expected changes to the wastewater and/or to the treatment system.

2. Notify the Executive Officer within 60 days after receipt of laboratory results indicating unplanned or unexpected changes to wastewater.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g., submittal of a modified NOI to the Executive Officer), including applicable laboratory analyses, the Executive Officer may issue a revised NOA for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary and/or a discharge no longer qualifies for this Order, the Discharger must cease discharge immediately and apply for an individual NPDES permit. Discharge may resume only after receipt of a new individual NPDES permit. See the Fact Sheet for further discussion of anti-backsliding and antidegradation issues.

D. **Termination of Discharge/Coverage**

Upon completion of treatment (if applicable) and cessation of the discharge, the Discharger shall request, using the Request for Termination of Coverage in Attachment E, official termination of coverage under this General Order from the Executive Officer. Upon approval of this request, the Discharger will no longer be authorized to discharge

wastewater covered by this General Order. The Discharger is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee and monitoring reports associated with this General Order until the Discharger receives a Notice of Termination (NOT) from the Executive Officer. Failure to submit the annual fee and monitoring reports may subject the Discharger to mandatory minimum penalties or discretionary penalties.

1. When the Central Valley Water Board issues an individual NPDES permit or WDRs with more specific requirements to a Discharger, the applicability of this General Order to that Discharger is automatically terminated on the effective date of the individual permit or WDRs.

2. Dischargers with drinking water supply systems authorized to discharge under this General Order who have been granted an exception to the priority pollutant criteria and objectives in the California Toxics Rule (CTR) and SIP, as allowed by section 5.3 of the SIP, must provide certification by a qualified biologist that the beneficial uses of the receiving water have been restored upon completion of the discharge.

E. **Expiration of General Order**

This General Order will expire 5 years after the effective date, as specified on the cover page of this General Order. In accordance with 40 C.F.R. section 122.6, if the permit is not reissued by the expiration date, the conditions of this General Order will continue in force and effect until a new General Order is issued.

F. **Ineligible Discharges**

The following discharges are ineligible for coverage under this General Order:

1. Discharges containing sewage of human origin;

2. Discharges to municipal wastewater collection systems; and

3. Discharges to ponds, infiltration basins, spray disposal areas, subsurface infiltration, injection wells, or other methods not involving discharge to surface waters and surface water drainage courses.

G. **Discharge Criteria**

Eligible Dischargers enrolling under this General Order are required to analyze the wastewater or receiving water, as applicable, for constituents listed in the appropriate column of Table I-1 in Attachment I and submit the results with the Notice of Intent (NOI) or application. Dischargers applying alum for phosphorus sequestration will need to include an Alum Application Plan (AAP) as described in Attachment K.

Attachment I contains screening levels based on water quality objectives/criteria from the California Toxics Rule (CTR), applicable Basin Plans, and other constituents and pollutants of concern. The most restrictive screening levels are necessary because this

Order is intended as a general order and covers limited threat discharges to all surface waters in the Central Valley of California. If MUN is a beneficial use of the surface water, then the most restrictive human health-based criteria are used. If MUN is not a beneficial use, then the most restrictive human health-based criteria may not be necessary. If the aquatic life criteria are more restrictive than the human health-based criteria, then the aquatic life criteria are used.

If the analytical test results of the discharge show that constituent concentrations do not exceed the screening levels, then the Discharger will be enrolled under this Order and treatment will not be required.

If the analytical test results of the discharge show that constituent concentrations exceed the Attachment I, section II and section III screening levels, then the Discharger will be enrolled under this Order and treatment will be required.

The Executive Officer shall indicate the applicable effluent limitations and monitoring requirements in the NOA when a Discharger is enrolled under this permit.

Attachment I also includes screening levels for several parameters which do not have applicable water quality criteria. If the analytical test results of the discharge show that these parameters are present in the effluent, then the Discharger will be enrolled under this Order and will be required to conduct additional effluent and downstream receiving water sampling to determine compliance with receiving water limitations.

V. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this General Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for limited threat point source discharges, as described herein, to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code. The Central Valley Water Board’s actions on issuing this permit for existing and new potable water discharges, and on the exceptions allowed by section 5.3 of the SIP is exempt from CEQA in accordance with California Code of Regulations, Title 14, Section 15061 (b)(3) which states that CEQA only applies to projects which have the potential for causing adverse environmental effects.

To satisfy the Categorical Exception requirements of Section 5.3 of the SIP, Dischargers seeking enrollment under this General Order will be required to submit project-specific information to the Executive Officer on the discharge and its water quality effects. The information required by the SIP is presented in the application requirements contained in section 9 of Attachment J.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan**. Requirements of this Order specifically implement the applicable Water Quality Control Plans.

   a. **Basin Plan**. The Central Valley Water Board adopted a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition, May 2018 and Tulare Lake Basin, Third Edition, May 2018 (hereinafter Basin Plans) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply: municipal and domestic supply; agricultural irrigation; stock watering; process supply; service supply; hydropower supply; water contact recreation; canoeing and rafting recreation; other non-contact water recreation; warm freshwater aquatic habitat; cold freshwater habitat; warm fish migration habitat; cold fish migration habitat; warm and cold spawning habitat; wildlife habitat; navigation; rare, threatened, or endangered species habitat; groundwater recharge; and freshwater replenishment.

   b**.** **Bay-Delta Plan**. The Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) was adopted in May 1995 by the State Water Board superseding the 1991 Bay-Delta Plan. The Bay-Delta Plan identifies the beneficial uses of the estuary and includes objectives for flow, salinity, and endangered species protection.

   The State Water Board adopted Decision 1641 (D-1641) on 29 December 1999 and revised on 15 March 2000. D-1641 implements flow objectives for the Bay-Delta Estuary, approves a petition to change points of diversion of the Central Valley Project and the State Water Project in the Southern Delta, and approves a petition to change places of use and purposes of use of the Central Valley Project. The requirements within this General Order are consistent with the Bay-Delta Plan.

   c. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on 7 January 1971 and amended this plan on 18 September 1975. This plan contains temperature objectives for surface waters. For elevated temperature waste discharges within

the Sacramento-San Joaquin Delta, effluent and receiving water temperature requirements are applicable and will be specified in the NOA. Requirements of this General Order are consistent with the Thermal Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR)**. U.S. EPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain federal water quality criteria for priority pollutants.

3. **State Implementation Policy**. On 2 March 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005, that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

   Section 5.3 of the SIP authorizes the Central Valley Water Board, after compliance with CEQA, to allow certain Dischargers short-term or seasonal exceptions from meeting priority pollutant criteria and objectives. This General Order authorizes a categorical exception to priority pollutant criteria and objectives for Dischargers who submit the appropriate information required by the SIP as required in the Notice of Intent (see Attachment J).

4. **Antidegradation Policy**. Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") (State Anti-Degradation Policy). The State Anti-Degradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Anti-Degradation Policy requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

5. **Anti-Backsliding Requirements**. Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Domestic Water Quality**. In compliance with Water Code section 106.3, 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 General Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

7. **Endangered Species Act Requirements**. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. Each Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

VI. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., section 1311(b)(1)(C); 40 C.F.R. section 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to federal regulations, 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” Federal regulations, 40 C.F.R. section 122.44(d)(1)(vi), further provide that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other

requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan for the Sacramento and San Joaquin River Basins at page 4-27 and the Basin Plan for the Tulare Basin at page 4-34, contains an implementation policy, "Policy for Application of Water Quality Objectives" and "Application of Water Quality Objectives", respectively, that specifies that the Central Valley Water Board "will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives." This Policy complies with 40 C.F.R. section 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board's "Policy for Application of Water Quality Objectives")(40 C.F.R. section 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at section 3.1.20) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents' objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "…water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)" in Title 22 of CCR. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs. The narrative tastes and odors objective states: "Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this General Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. Dischargers seeking authorization to discharge under this General Order are required to submit a ROWD as part of the Notice of Intent for the discharges described in this General Order; therefore, discharge of wastes, other than those described in section I and meeting the eligibility criteria in sections II.C, of this General Order are prohibited.

2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at CFR section122.41(m)(4)).** As stated in section I.G of Attachment B, Standard Provisions, this General Order prohibits bypass from any portion of a treatment facility, as specified in the NOA. Federal regulations, 40 C.F.R. section 122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance

4. **Prohibition III.D (Flow).** This prohibition is based on the actual production flow rate as specified in the NOA in accordance with 40 C.F.R. 122.45(b)(2)(i), which requires, "…calculation of any permit limitations, standards, or prohibitions which are based on production (or other measure of operation) shall be based not upon the designed production capacity but rather upon a reasonable measure of actual production of the facility. For new sources or new dischargers, actual production shall be estimated using projected production. The time period of the measure of production shall correspond to the time period of the calculated permit limitations; for example, monthly production shall be used to calculate average monthly discharge limitations."

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. Active hard rock mines with discharges authorized by this General Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards (ELGs) for the Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory of the Ore Mining and Dressing Point Source Category in 40 C.F.R. part 440, subpart J and/or Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Central Valley Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

a. Technology-Based Effluent Limitations for Biochemical Oxygen Demand, Total Suspended Solids, and Settleable Solids. The types of discharges authorized by this General Order are described in sections II and III of this Fact Sheet. These types of discharges are considered relatively pollutant-free and pose a low or limited threat to water quality. Based on available effluent data from the limited threat discharges authorized by this General Order, the Central Valley Water Board has established technology-based effluent limitations for biochemical oxygen demand (BOD), total suspended solids (TSS), and settleable solids based on BPJ, as follows:

Table D-1. Technology-Based Effluent Limitations for Biochemical Oxygen Demand, Total Suspended Solids, and Settleable Solids

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	20
Total Suspended Solids	mg/L	10	20
Settleable Solids	mL/L	--	0.1

b. Technology-Based Effluent Limitations for Remediation Sites

Since this General Order regulates the discharge of wastewater that may be impacted by toxic organic constituents, VOCs, pesticides, inorganic constituents, perchlorate and other regulated chemical constituents, various types of treatment systems could be employed to remove these pollutants in wastewater to meet applicable permit limits. For example, air stripping, carbon absorption, or chemical oxidation treatment systems could be used to remove VOCs in groundwater. Reverse osmosis, ion exchange, or pH adjustment could be used as treatment technologies to remove perchlorate or metals. Biological systems could be used to degrade or remove conventional pollutants and semi-volatile organic compounds.

i. VOCs

Technology-based effluent limitations for remediation of VOCs with proven technology have been included in this General Order, as shown in Table D-2. These effluent limitations reflect the expected performance of existing treatment technologies. However, with the potential diversity of limited threat discharges and the uncertainty regarding the specific constituents of concern to be regulated, this General Order does not establish technology-based effluent limitations based on the performance of non-proven treatment technologies that may be used at specific remediation projects. According to 40 C.F.R. section 122.44(k), BMPs, can be required in lieu of technology-based effluent limitations when numeric effluent limitations are infeasible. Therefore, based on BPJ, BMPs will serve as the equivalent of technology-based effluent limitations, in order to carry out the purposes and intent of the CWA. Each Discharger of limited threat discharges is required to develop and implement BMPs that establish site-specific plans and procedures that will ensure proper operation and maintenance, prevent the addition of chemicals or other substances from being introduced into the wastewater, and prevent the addition of pollutants from other non-permitted process waters, spills, or other sources of pollutants at the facilities.

ii. Perchlorate

Perchlorate and its salts are used in, but not limited to, solid propellant for rockets, missiles, and fireworks. The defense and aerospace industries purchase more than 90 percent of all the perchlorate manufactured. Perchlorate has been determined to have a potential adverse impact on the thyroid gland. Ion exchange is an ex situ technology used to remove perchlorate from drinking water, groundwater, surface water, and environmental media at full scale. Ion exchange is the most frequently used ex situ treatment technology for perchlorate. The most commonly used ion exchange media are synthetic, strongly basic, anion exchange resins. Section 64431 of Title 22 of the California Code of Regulations was amended in 2007 to include a primary MCL for perchlorate of 6 µg/L. However, ion exchange technology has been used to reduce perchlorate concentrations to less than 4 µg/L. Therefore, a technology-based effluent limitation for remediation of perchlorate with proven technology has been included in this General Order, as shown in Table D-2.

Water quality based effluent limitations may also be required for the constituents in Table D-2. The more stringent of the water quality-based effluent limitations and the technology-based effluent limitations will be established in the NOA.

Table D-2. Technology-based Effluent Limitations for Remediation Sites

Parameter	Units	Maximum Daily Effluent Limitations
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5

Parameter	Units	Maximum Daily Effluent Limitations
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Methylene Chloride	µg/L	0.5
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.5
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Stoddard Solvent	µg/L	0.5
Perchlorate	µg/L	4.0
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

c. For the Boeing Company's groundwater extraction and treatment (GET) systems, Mather GET H-B and Southern Groundwater Study Area (SGSA) GET, the effluent limitations for chloroform and cis-1,2-dichloroethene in Table D-3 apply.

Table D-3. Chloroform and cis-1,2-dichloroethene for SGSA GET and Mather GET H-B Parameter	Units	Maximum Daily Effluent Limitations	Location
cis-1,2-Dichloroethene	µg/L	1.0	SGSA GET
chloroform	µg/L	3.0	Mather GET H-B

i. cis-1,2-Dichloroethene (cis-1,2-DCE)

Although granular activated carbon (GAC) is the best available technology for removal of cis-1,2- DCE from groundwater, SGSA GET historical analytical data indicate nearly instantaneous breakthrough of cis-1,2- DCE at the midpoint between GAC vessels following GAC changeout. Operational records demonstrate that cis-1,2- DCE breakthrough challenges were observed shortly after the SGSA GET system was placed in operation since at least 2009. Accelerated breakthrough may be caused

by adverse impacts on GAC performance from the occurrence of natural organic matter in the system. The natural organic matter, whether from on-going biofouling challenges in the system or from naturally-occurring dissolved or colloidal carbon in the groundwater, competes with the target contaminants and reduces the overall effective GAC adsorption capacity available for removing VOCs (including cis-1,2- DCE). Intensive maintenance is conducted at the SGSA GET treatment system to address the occurrence of natural organic matter. Also, various biofouling mitigation efforts have been tested and applied since 2009. The cis-1,2-DCE effluent limitation of 1.0 µg/L applies to the discharge based on best available technology given site-specific challenges while remaining protective of human health and the environment.

ii. Chloroform

The source of chloroform at Mather GET H-B is unclear and only impacts select extraction wells. Currently, the influent chloroform concentration is mainly from one well (EX-7); the maximum EX-7 historical chloroform concentration since 2017 is 3.9 µg/L. Although the combined influent chloroform concentration at Mather GET H-B is typically approximately 0.5 µg/L, this is due to dilution from the non-chloroform producing wells. If shutdowns of non-chloroform producing wells occur, for either unplanned or planned maintenance needs, dilution is minimized and may result in elevated influent chloroform concentrations.

Historical influent and effluent analytical data from Mather GET H-B demonstrate that chloroform breakthrough occurs within a matter of days, after which chloroform is at equilibrium within the GAC treatment system and the chloroform effluent concentration is equal to its influent concentration. Model-simulated breakthrough evaluation suggests that the rapid breakthrough of chloroform at the Mather GET H-B system is due to decreased GAC treatment caused by natural organic matter in the influent, which decreases the GAC adsorption capacity for chloroform due to competitive adsorption. Elevated concentrations of chloroform in the influent, caused by minimized dilution and/or elevated chloroform concentrations from yet-to-operate extraction well EX-14, may cause an increase in effluent concentrations.

The chloroform effluent limitation of 3.0 µg/L applies to the discharge and maintains the Discharger's prior permit effluent limitation, which is consistent with protection of human health and the environment.

d. Technology-Based Effluent Limitations for Active Mines (Other Than Placer Deposits)

ELGs for discharges from mines that produce copper, lead, zinc, gold, silver, or molybdenum bearing ores, or any combination of these ores from open-pit or underground operations other than placer deposits have been promulgated at

40 C.F.R. part 440, subpart J. 40 C.F.R. sections 440.102(a) and 440.103(a) established technology-based effluent limitations representing BPT and BAT, respectively, for pollutants discharged in mine drainage as follows:

Table D-4. Technology-based Effluent Limitations for Active Hard Rock Mines

Parameter	Units	Effluent Limitations Average Monthly	Effluent Limitations Maximum Daily	Other
pH	standard units	--	--	6.0, as an instantaneous minimum 9.0, as an instantaneous maximum
Total Suspended Solids	mg/L	20	30	--
Cadmium, Total	µg/L	50	100	--
Copper, Total	µg/L	150	300	--
Lead, Total	µg/L	300	600	--
Mercury, Total	µg/L	1.0	2.0	--
Zinc, Total	µg/L	750	1,500	--

Water quality-based effluent limitations may also be required for the constituents in Table D-3. The more stringent of the water quality-based effluent limitations and the technology-based effluent limitations will be established in the NOA.

e. Technology-Based Effluent Limitations for Petroleum Fuel Pollution Remediation Projects

The primary constituents of concern with petroleum products are total petroleum hydrocarbons in the gasoline, diesel, and heavier ranges, and may include jet fuel, motor oil, kerosene, and other fuel oils; benzene; toluene; ethylbenzene; xylene; and methyl tertiary butyl ether. In addition, other oxygenates and additives such as methanol, tertiary butyl alcohol, di-isopropyl ether, ethyl tertiary butyl ether, and tertiary amyl methyl ether may also be found in groundwater from cleanup of petroleum fuel pollution. Existing wastewater treatment technology, primarily utilizing air stripping and/or activated carbon, is capable of dependably removing these constituents to concentrations that are generally non-detectable by current analytical technology. This General Order establishes technology-based effluent limitations based on the current reporting levels for the pollutants of concern.

Table D-5. Technology-Based Effluent Limitations for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Maximum Daily Effluent Limitation
Benzene	µg/L	0.5
Di-isopropyl Ether	µg/L	5.0

Parameter	Units	Maximum Daily Effluent Limitation
Ethylbenzene	µg/L	0.5
Ethylene Dibromide	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
Ethyl Tertiary Butyl Ether	µg/L	5.0
Methanol	µg/L	20
Methyl Tertiary Butyl Ether	µg/L	1.0
Naphthalene	µg/L	5.0
Tertiary Amyl Methyl Ether	µg/L	1.0
Tertiary Butyl Alcohol	µg/L	10
Toluene	µg/L	0.5
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	50
Xylene	µg/L	0.5

Table D-4 Notes:

1. **Xylene.** Applies to the sum of o-xylene, m-xylene, and p-xylene

f. Technology-Based Effluent Limitations for Hydroelectric Power Projects

Oil and grease is a primary constituent of concern for discharges from hydroelectric power generation facilities. Existing wastewater treatment technology is capable of meeting a concentration 15 mg/L for oil and grease. Therefore, based on BPJ, this General Order includes TBELs for oil and grease as shown in Table D-5 to ensure adequate treatment of the hydroelectric power project wastewater.

Table D-6. Technology-Based Effluent Limitations for Hydroelectric Power Projects

Parameter	Units	Maximum Daily Effluent Limitation
Oil and Grease	mg/L	15

g Technology-Based Effluent Limitations for Alum Application for Phosphorus Sequestration

The effluent limitations for alum application include the requirement to implement an approved Alum Application Plan (AAP) that describes appropriate best management practices (BMPs), including an appropriate rate of application and measures to take into account application conditions, such as pH levels in the receiving water. The BMPs within the AAP will be implemented to prevent and minimize any impacts caused by the discharge and assure the protection of water quality within the receiving waters and represent the appropriate level of control under CWA section 301(b) and 40 C.F.R. section 125.3. The

development of BMPs provides the flexibility necessary to establish controls to prevent and minimize any impacts while allowing the Discharger to implement appropriate BMPs based on the specific application.

40 C.F.R. section 122.44(k)(3) allows the use of other requirements such as BMPs in lieu of numeric effluent limits if, among other reasons, numeric effluent limits are infeasible. Alum application for phosphorus sequestration is designed for direct application to water bodies to address excess phosphorus concentrations. It is infeasible to establish numeric effluent limits because, consistent with the Clean Water Act, this General Order regulates the discharge of any residuals from alum application, rather than the direct application to receiving waters for phosphorus sequestration. Accordingly, the precise location at which a numeric effluent limitation would apply is not easily determinable. Additionally, alum applications may be short in duration and result in variable residual concentrations throughout the receiving waters, making it difficult to establish a numeric limitation at each location. Therefore, the effluent limitation for alum application more appropriately and feasibly includes the requirement to implement an approved AAP that describes appropriate BMPs.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

Finally, 40 C.F.R. section 122(d)(1)(vii) requires effluent limits to be developed consistent with any available waste load allocations developed and approved for the discharge.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan for the Sacramento and San Joaquin River Basins on page 2-1 states: “Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…” and with respect to disposal of wastewaters states that “...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.” The Basin Plan for the Tulare Lake Basin on page 2-1 states: “Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality objectives, the Regional Water Board must consider past, present, and probable future beneficial uses of water.” and with respect to disposal of wastewaters states that “...use of waters for disposal of wastewaters is not included as a beneficial use…and are subject to regulation as activities that may harm protected uses.”

The federal CWA section 101(a)(2), states: “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.” Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 C.F.R. section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

a. **Receiving Water and Beneficial Uses.** The limited threat discharges described in this General Order may potentially discharge to any surface water in the Central Valley. Refer to IV.C.1 above for a complete listing of the receiving water beneficial uses. This General Order contains both effluent limitations based on the municipal and domestic supply beneficial use and effluent limitations when the municipal and domestic supply beneficial use does not apply.

b. **Effluent and Ambient Background Data.** Specific monitoring data is not available to establish effluent limitations that would apply to all potential Dischargers seeking coverage under this General Order. This General Order requires Dischargers seeking authorization to discharge under this General Order to provide analysis of the proposed effluent. As described below, based on these analyses, the Central Valley Water Board will conduct an RPA in accordance with section 1.3, Step 7 of the SIP by comparing the results to the screening levels contained in Attachment I of this General Order. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Central Valley Water Board may use the SIP as guidance for water quality-based toxics control (see Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City)). The SIP states in the introduction "The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency." Therefore, in this General Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents.

c. **Assimilative Capacity/Mixing Zone.** The effluent limitations for discharges covered by this General Order are calculated without mixing zones and dilution, because eligible discharges are clean or relatively pollutant-free wastewaters that pose little or no threat to water quality and can meet end-of-pipe effluent limitations.

d. **Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc which are presented in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total criteria.

e. **Hardness-Dependent CTR Metals Criteria.** The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

This Order has established the criteria for hardness-dependent metals based on the hardness of the receiving water (actual ambient hardness) as required by the SIP and the CTR. The SIP does not address how to determine the hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water. The CTR requires that, for waters with a hardness of 400 mg/L (as $CaCO_3$), or less, the actual ambient hardness of the surface water must be used (40 C.F.R. section 131.38(c)(4)). The SIP and the CTR require the use of "receiving water" or "actual ambient" hardness, respectively, to determine effluent

limitations for these metals. The CTR requires that the hardness values used shall be consistent with the design discharge conditions for design flows and mixing zones (40 C.F.R. section 131.3(c)(4)(ii)). Therefore, the Central Valley Water Board has considerable discretion to consider upstream and downstream ambient conditions when establishing the appropriate water quality criteria that fully complies with the CTR and SIP.

Background

The State Water Board provided direction regarding the selection of hardness in two precedential water quality orders; WQO 2008-0008 for the City of Davis Wastewater Treatment Plant (Davis Order) and WQO 2004-0013 for the Yuba City Wastewater Treatment Plant (Yuba City Order). The State Water Board recognized that the SIP and the CTR do not discuss the manner in which hardness is to be ascertained, thus regional water boards have considerable discretion in determining ambient hardness so long as the selected value is protective of water quality criteria under the given flow conditions. (Davis Order, p.10). The State Water Board explained that it is necessary that, "The [hardness] value selected should provide protection for all times of discharge under varying hardness conditions." (Yuba City Order, p. 8). The Davis Order also provides that, "Regardless of the hardness used, the resulting limits must always be protective of water quality criteria under all flow conditions." (Davis Order, p. 11)

The equation describing the total regulatory criterion, as established in the CTR, is as follows:

$$\text{CTR Criterion} = \text{WER} \times (e^{m[\ln(H)]+b}) \quad \text{(Equation 1)}$$

Where:

H = ambient hardness (mg/L as $CaCO_3$)

WER = water-effect ratio

m, b = metal- and criterion-specific constants

The direction in the CTR regarding hardness selection is that it must be based on ambient hardness and consistent with design discharge conditions for design flows and mixing zones. Consistent with design discharge conditions and design flows means that the selected "design" hardness must result in effluent limitations under design discharge conditions that do not result in more than one exceedance of the applicable criteria in a three-year period (40 C.F.R. section 131.38(c)(2)(iii) Table 4, notes 1 and 2). Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. Effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Use of the lowest observed ambient hardness is protective of aquatic life beneficial uses.

Approach to derivation of criteria
Ambient hardness may be variable. Because of the variation, there is no single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum, mid-point). While the hardness selected must be the hardness of the ambient receiving water, selection of an ambient receiving water hardness that is too high would result in effluent limitations that do not protect beneficial uses. Also, the use of minimum ambient hardness would result in criteria that may not be representative considering the wide range of ambient conditions.

This General Order includes effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and zinc which are dependent on water hardness. The CTR expresses the objectives for these metals through equations where the hardness of the receiving water is a variable. To simplify the permitting process for this General Order, it was necessary that fixed hardness values be used in these equations. This General Order requires Dischargers to analyze the effluent for hardness. The Discharger shall submit the analytical results with the Notice of Intent. Upon approval of the Executive Officer, these hardness values will be used to determine the effluent limitations from the appropriate table of limits (see section V.A.1.g, Tables 6A through 6G) of this General Order. Tables 6A through 6G contain effluent limitations for cadmium, chromium III, copper, lead, nickel, silver, and zinc with ranges of hardness between 0 mg/L and 400 mg/L.

3. Determining the Need for WQBELs

a. **All Limited Threat Discharges, with the exception of discharges related to alum application for the sequestration of phosphorous (See Section D.VI.B.2.g).** Effluent limitations must be established for discharges that have the reasonable potential to exceed water quality standards. Since this is a General Order for all limited threat discharges to surface waters in the Central Valley of California, specific data are not available to establish generic effluent limitations. Therefore, screening levels are specified in Attachment I of this General Order for pollutants, constituents, and parameters, and are based on the most protective water quality criteria, including CTR criteria and MCLs. The Discharger is required to analyze a representative sample of the discharge as specified in Table I-1 of Attachment I. If the analytical data demonstrate that constituent concentrations in the discharge exceed the screening levels, treatment will be required. The respective effluent limitations shall be applicable to the discharge, as specified in the NOA from the Executive Officer. If the analytical data demonstrate that constituent concentrations in the discharge are below the screening levels listed in Attachment I of this General Order, the water quality-based effluent limitations will not be applicable to the discharge. Treatment and water quality-based effluent limitations for discharges of liquid mine waste will be applied as necessary.

b. **Priority Pollutants.** Most priority pollutants have applicable CTR criteria or MCLs; therefore, water quality limits have been developed. The NOA will specify whether the effluent limitations apply for a specific discharger. Several priority

pollutants do not have applicable CTR criteria or MCLs. However, water quality limits have been developed to interpret narrative Basin Plan objectives for several of these pollutants which include chloroethane, methyl chloride, 2 nitrophenol, 4-nitrophenol, 3-methyl-4-chlorophenol, 4-bromophenyl phenyl ether, 2,6-dinitrotoluene, naphthalene, and delta-BHC. Analysis of dilution, proximity of downstream diversions, and other factors is required in order to determine the applicability of interpreting the narrative objective for these pollutants based on water quality limits. This type of analysis is beyond the scope of this General Order. In addition to these pollutants, several priority pollutants have no CTR criteria, MCLs, or alternative water quality limits to interpret narrative Basin Plan objectives. These pollutants include 2-chloroethylvinyl ether, acenaphthylene, benzo(ghi)perylene, bis(2 chloroethoxy)methane, 4-chlorophenyl phenyl ether, di-n-octyl phthalate, and phenanthrene. Results of effluent sampling for priority pollutants, including those that do not have applicable water quality criteria, is required in Attachment C. If detectable concentrations of these pollutants are present in the discharge, additional effluent and ambient receiving water monitoring may be established, as specified in the NOA from the Executive Officer. The additional monitoring would be used to determine if the discharge is adversely impacting a beneficial use (i.e., violating Receiving Water Limitations in section VIII.A). If the discharge is found to be adversely affecting beneficial uses, the Central Valley Water Board would take the appropriate enforcement actions, terminate coverage for the discharge under this General Order, and/or take other actions to resolve the violation.

c. **Constituents with Numeric Water Quality Objectives.** The Basin Plans contain numeric water quality objectives. Some objectives apply to all waterbodies within the applicable basins, whereas others apply only to certain waterbodies. This General Order requires effluent sampling for those Priority Pollutant constituents with applicable numeric water quality objectives in the Basin Plans. If the analytical data demonstrate that constituent concentrations in the discharge exceed an applicable numeric water quality objective from the Basin Plan, treatment will be required and an effluent limitation shall be applied, as specified in the NOA from the Executive Officer.

d. **Aluminum.** The State Water Board Division of Drinking Water (DDW) has established Secondary MCLs to assist public drinking water systems in managing their drinking water for public welfare considerations, such as taste, color, and odor. The Secondary MCL for aluminum is 200 µg/L for protection of the MUN beneficial use. Title 22 requires compliance with Secondary MCLs on an annual average basis. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for aluminum.

The 2018 U.S. EPA NAWQC for protection of freshwater aquatic life for aluminum recommends acute (1-hour average; criteria maximum concentration or CMC) and chronic (4-day average; criteria continuous concentration or CCC) standards based upon Multiple Linear Regression (MLR) models for vertebrate

and invertebrate species that use pH, dissolved organic carbon (DOC), and total hardness to quantify the effects of these water chemistry parameters on the bioavailability and resultant toxicity of aluminum to aquatic organisms. The 2018 Aluminum NAWQC document provides look up tables or a Microsoft Excel spreadsheet to calculate the criteria based on pH, DOC, and total hardness. The U.S. EPA aluminum criteria have been used to implement the Basin Plan's narrative toxicity objective.

This General Order contains the Secondary MCL of 200 µg/L as the screening level for aluminum (see Attachment I, section II.A.1) when the MUN beneficial use is applicable. The screening level calculated using the 2018 U.S. EPA NAWQC recommendation will be used to conduct the RPA when the MUN beneficial use is not applicable and if it is more stringent than the 200 µg/L for MUN when the MUN beneficial use is applicable. This Order also contains effluent limitations for aluminum based on the criteria discussed above (see section V.A.1.e.i Tables 4A through 4I of this Order). Based on the monitoring requirements, if the proposed discharge contains concentrations of aluminum above the applicable screening level, the NOA may include effluent limitations for aluminum and a requirement for treatment. If sufficient data is available, the RPA for aluminum will be evaluated based on an annual average.

e. **Ammonia.** To be authorized by this General Order, all Dischargers of limited threat discharges to surface waters and surface water drainage courses must demonstrate that the wastewater to be discharged does not contain human sewage and does not contain ammonia exceeding 0.025 mg/L (as N). Consequently, the Central Valley Water Board finds the limited threat discharges authorized by this General Order will not exhibit reasonable potential to cause or contribute to an exceedance of the applicable water quality objective for ammonia, and this Order does not include effluent limitations for ammonia.

f. **Diazinon and Chlorpyrifos.** The Central Valley Water Board completed TMDLs for diazinon and chlorpyrifos in the Sacramento – San Joaquin Delta Waterways, the Sacramento and Feather Rivers, San Joaquin River, and Central Valley Waterbodies and amended the Sacramento and San Joaquin River Basin Plan to include diazinon and chlorpyrifos waste load allocations and water quality objectives.

Basin Plan amendments were adopted to modify the Sacramento and San Joaquin River Basin Plan Chapter 3 (Water Quality Objectives) to establish site-specific numeric objectives for diazinon and chlorpyrifos and identified the requirements to meet the additive formula already in Basin Plan Chapter 4 (Implementation) for the additive toxicity of diazinon and chlorpyrifos. The water quality objectives are not applicable to discharges in the Tulare Lake Basin.

The amendment states that "The waste load allocations for all NPDES-permitted dischargers…shall not exceed the sum (S) of one (1) as defined below.

$S = Cd/WQOd + Cc/WQOc \leq 1.0$

Where:

Cd = diazinon concentration in µg/L of point source discharge

Cc = chlorpyrifos concentration in µg/L of point source discharge

WQOd = acute or chronic diazinon water quality objective in µg/L

WQOc = acute or chronic chlorpyrifos water quality objective in µg/L

This Order contains effluent limitations for diazinon and chlorpyrifos based on the criteria discussed above. Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the sum (S) above, analytical results that are reported as 'non-detectable' concentrations are considered to be zero."

Table 3-4 of the Sacramento River and San Joaquin River Basin Plan identifies applicable waterways where the diazinon and chlorpyrifos water quality objectives are applicable. If the proposed discharge is to a listed waterway subject to the TMDLs, the NOA shall include effluent limitations for diazinon and chlorpyrifos.

f. **Iron.** The Secondary MCL – Consumer Acceptance Limit for iron is 300 µg/L, which is used to implement the Basin Plan's chemical constituent objective for the protection of the municipal and domestic supply beneficial use. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for iron.

   This General Order contains the Secondary MCL of 300 µg/L as the screening level for iron when the MUN beneficial use is applicable and no screening level when the MUN beneficial use is not applicable. This Order also contains effluent limitations for iron based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of iron above the screening level and the discharge is planned for more than one year from the project start date (either intermittent or continuous), the NOA may include iron effluent limitations and a requirement for treatment of iron. If sufficient data is available, the RPA for iron will be evaluated based on an annual average.

g. **Manganese.** The Secondary MCL – Consumer Acceptance Limit for manganese is 50 µg/L, which is used to implement the Basin Plan's chemical constituent objective for the protection of municipal and domestic supply. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for manganese.

   This General Order contains the Secondary MCL of 50 µg/L as the screening level for manganese when the MUN beneficial use is applicable and no

screening level when the MUN beneficial use is not applicable. This Order also contains effluent limitations for manganese based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of manganese above the screening level and the discharge is planned for more than one year from the project start date (either intermittent or continuous), the NOA may include manganese effluent limitations and a requirement for treatment of manganese. If sufficient data is available, the RPA for manganese will be evaluated based on an annual average.

h. **Metals, Hardness-Dependent.** The California Toxics Rule (CTR) includes hardness-dependent criteria for the protection of freshwater aquatic life for cadmium, chromium III, copper, lead, nickel, silver, and zinc. See the discussion regarding hardness, above. DDW has adopted Primary MCLs for cadmium, lead, and nickel of 5 µg/L, 15 µg/L, and 100 µg/L, respectively, for the protection of human health.

   This General Order specifies screening levels for hardness-dependent metals (see Attachment I, section II.C) and contains effluent limitations for hardness-dependent metals based on the criteria discussed above (see section V.A.1.g Tables 6A through 6G of this Order). This Order also contains effluent limitations for cadmium, lead, or nickel for instances where the Primary MCL is more stringent than the hardness-dependent criteria. Based on the monitoring requirements, if the proposed discharge contains concentrations of hardness-dependent metals above the screening level, the NOA may include effluent limitations for hardness-dependent metals and a requirement for treatment.

i. **Nitrate, Nitrite, and Nitrate plus Nitrite.** DDW has adopted Primary MCLs for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L (measured as nitrogen), respectively. DDW has also adopted a Primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen.

   U.S. EPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen). For nitrate, U.S. EPA has developed Drinking Water Standards (10 mg/L as Primary MCL) and NAWQC for protection of human health (10 mg/L for non-cancer health effects).

   Treated groundwater and other types of limited threat wastewaters covered by this Order may contain concentrations of nitrate plus nitrite that exceed the Primary MCL for nitrate plus nitrite.

   This General Order specifies a screening level for nitrate plus nitrite of 10 mg/L when the MUN beneficial use is applicable and no screening level when the MUN beneficial use is not applicable. This Order also contains effluent limitations for nitrate plus nitrite based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of nitrate plus nitrite above the screening level, the NOA may include nitrate plus nitrite effluent limitations and a requirement for treatment.

j. **pH.** The Sacramento and San Joaquin River Basin Plan and the Tulare Lake Basin Plan contain the following pH water quality objectives:

i. The pH of all 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.

ii. The pH of all discharges to Goose Lake in Modoc County shall at all times be within the range of 7.5 and 9.5.

iii. The pH of all discharges within the Tulare Lake Basin shall at all times be within the range of 6.5 and 8.3.

This General Order contains a screening level for pH and effluent limitations for pH based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains pH outside the screening level, the NOA will include a requirement for treatment of pH.

k. **Pesticides**. The Sacramento and San Joaquin River Basin Plan and the Tulare Lake Basin Plan contain the following water quality objectives for pesticides:

i. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the discharge at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer for the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for the Tulare Lake Basin.

ii. Thiobencarb shall not be discharged in excess of 1.0 µg/L for the Sacramento and San Joaquin River Basins.

iii. For other pesticides not listed here, see the Pesticide Water Quality Objective in the Basin Plan.

This General Order contains screening levels for pesticides and effluent limitations for pesticides based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains pesticide concentrations above the screening levels, the NOA may include pesticide effluent limitations and a requirement for treatment of pesticides.

l. **Salinity.**

The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, and chloride. Secondary MCLs are for protection of

public welfare and are stated as a recommended level, upper level, and a short-term maximum level.

The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for electrical conductivity, total dissolved solids, and sulfate. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective.

Applicable agricultural water quality objectives vary. Procedures for establishing the applicable numeric limitation to implement the narrative objective can be found in the Policy for Application of Water Quality Objectives, section 4.2.2.1.9 of the Basin Plan. However, the Basin Plan does not require improvement over naturally occurring background concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable water quality objective, the natural background concentration will be considered to comply with the objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply.

The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. The applicable water quality objectives for EC or TDS, sulfate, and chloride are discussed below.

i. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

ii. **Electrical Conductivity or Total Dissolved Solids.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum, or when expressed as TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum.

iii. **Sulfate.** The Secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

On 17 January 2020, certain amendments to the Basin Plan incorporating a Program to Control and Permit Salt Discharges to Surface and Groundwater (Salt Control Program) became effective. Other amendments became effective on 2 November 2020 when approved by the U.S. EPA. The Salt Control Program is a three-phased program, with each phase lasting 10 to 15 years. The Basin Plan requires all salt dischargers to comply with the provisions of the program. Two compliance pathways are available for salt dischargers during Phase 1.

The Phase 1 Compliance pathways are: 1) Conservative Salinity Permitting Approach (Conservative Pathway), which utilizes the existing regulatory structure and focuses on source control, conservative salinity limits on the discharge, and limits the use of assimilative capacity and compliance time schedules; and, 2) Alternative Salinity Permitting Approach (Alternative Pathway), which is an alternative approach to compliance through implementation of specific requirements such as participating in the Salinity Prioritization and Optimization Study (P&O) rather than the application of conservative discharge limits.

This General Order requires all wastewater dischargers to submit a Notice of Intent for the Salt Control Program to determine the applicability of the either the Alternative or Conservative Pathway under the Salt Control Program or whether the discharge already consistently complies with water quality objectives for salinity. The NOA will include salinity requirements based on the appropriate permitting pathway as follows:

i. **Conservative Pathway.** This General Order contains effluent limitations for electrical conductivity of 700 µmhos/cm and 900 µmhos/cm based on the AGR and MUN beneficial use, respectively. If the proposed discharge is greater than or equal to 180 days in length, the Discharger will be required to develop and implement a salinity evaluation and minimization plan, as specified in the NOA.

ii. **Alternative Pathway.** For discharges greater than or equal to 180 days in length, a performance-based trigger for electrical conductivity will be specified in the Notice of Applicability, and the Discharger will be required to develop and implement a salinity evaluation and minimization plan, as specified in the NOA.

Under limited circumstances when groundwater is naturally high in salinity and source control is infeasible, for example construction dewatering projects, the requirement to submit, the requirement to submit a Salinity Evaluation and Minimization Plan may not be specified in the NOA.

Limited Threat General Order R5-2016-0076-01 contained a screening level of 900 µmhos/cm as a recommended level. This General Order includes an updated screening level for electrical conductivity of 1,600 µmhos/cm based on the Basin Plan Amendments for CV-SALTS.

m. **Total Residual Chlorine.** U.S. EPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1 hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.

This General Order contains effluent limitations for residual chlorine based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of chlorine residual above the effluent

limitations, the NOA will include total residual chlorine effluent limitations and a requirement for treatment.

Based on the San Francisco Bay Regional Water Quality Control Board (San Francisco Water Board) General Order for Discharges from Surface Water Treatment Facilities for Potable Supply (Order R2-2003-0062, NPDES CAG382001), the previous General Order R5-2016-0076-01 included a reporting level (RL) of 0.08 mg/L to determine compliance with the effluent limitations. San Francisco Water Board General Order for Discharges of Filter Backwash from Drinking Water Filter Facilities (Order R2-2016-0009, NPDES CAG382001) revised this RL to 0.1 mg/L based on information from the Missouri Department of Natural Resources (2004, Permit Manual, Appendix T: Total Chlorine Residual Study). Following applicable U.S. EPA guidance, the generated data from the Total Chlorine Residual that showed that residual chlorine results ranging between the MDL of 0.04 mg/L and a calculated ML of 0.1 mg/L are not reliable due to analytical noise. This General Order specifies an ML for chlorine residual of 0.1 mg/L which is consistent with the Statewide General Permit and other recently issued Regional Water Board permits.

The RL of 0.1 mg/L represents a level that handheld field meters are capable of achieving. The Central Valley Water Board concurs with the approach used by the San Francisco Water Board. Therefore, this General Order requires dischargers to utilize a method capable of achieving a RL of 0.1 mg/L, consistent with the RL required by the San Francisco Water Board, until the State Water Board adopts a statewide policy with a specified RL achievable in the field and laboratory. A reopener has been included that will allow the Central Valley Water Board to reopen this General Order if a statewide policy for total residual chlorine takes effect during the term of the permit, to allow the Central Valley Water Board to make modifications consistent with the statewide policy.

n. **Limited Threat Discharges to Specific Waterbodies.** The Basin Plans establish specific water quality criteria for discharges to specific watersheds/reaches and are specified in Attachment I, section III. If the discharge is within an applicable watershed/reach included in Attachment I, section III, the Discharger is required to analyze a representative sample of the discharge for the applicable pollutants. The criteria contained in Attachment I, section III supersede those contained in Attachment I, section II for respective parameters applicable to the discharge. If the analytical data demonstrate that constituent concentrations in the discharge exceed the water quality criteria listed in Attachment I, section III, treatment will be required and the respective effluent limitations shall apply in addition to applicable effluent limitations established due to exceedances of the criteria for additional parameters contained in Attachment I, section II, as specified in the NOA from the Executive Officer.

o. **Temperature.** For elevated temperature waste discharges within the Sacramento-San Joaquin Delta the Thermal Plan requirements are applicable. The Thermal Plan requires that, “The maximum temperature shall not exceed the

natural receiving water temperature by more than 20°F." If applicable, an effluent limit for temperature will be specified in the NOA.

p. **Petroleum Constituents.** Discharges of groundwater from cleanup of petroleum fuel pollution has a reasonable potential to cause or contribute to an in-stream excursion above water quality objectives for petroleum products, specifically, benzene, ethylbenzene, ethylene dibromide, 1,2-Dichloroethane, methanol, methyl tertiary butyl ether, naphthalene, carcinogenic PAHs, toluene, total petroleum hydrocarbons, and xylene. In order to protect the receiving water when discharging groundwater from cleanup of petroleum fuel pollution, this Order contains water quality-based effluent limitations or technology-based effluent limitations for these constituents, whichever are more stringent. Based on the monitoring requirements, if the proposed discharge contains petroleum products above the respective criteria, the NOA may include effluent limitations for applicable petroleum products.

Table D-7. WQBELs for Petroleum Constituents

Parameter	Units	Effluent Limitations Average Monthly	Effluent Limitations Maximum Daily
Benzene	µg/L	1	2
Ethylbenzene	µg/L	47	93
Ethylene Dibromide (1,2-Dibromomethane)	µg/L	0.05	0.10
Ethylene Dichloride (1,2-Dichloroethane)	µg/L	0.38	0.76
Methanol	µg/L	3,50	7,000
Methyl Tertiary Butyl Ether	µg/L	8[3]	16
Naphthalene	µg/L	17	34
Carcinogenic Polynuclear Aromatic Hydrocarbons	µg/L	0.0044	0.0088
Toluene	µg/L	6	125
Total Petroleum Hydrocarbons (Gasoline and Diesel Ranges)	µg/L	100	200
Xylene	µg/L	31	62

Table D-6 Notes:

1. For benzene, ethylbenzene, methanol, methyl tertiary butyl ether, naphthalene, toluene, total petroleum hydrocarbons (gasoline and diesel ranges), and xylene, more stringent technology-based effluent limitations are applied in this General Order (see section V.B.4).

2. Carcinogenic Polynuclear Aromatic Hydrocarbons. Average monthly and maximum daily effluent limitations apply to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluroanthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

3. **Xylene.** Water quality-based effluent limitations in Table D-6 are applicable to the sum of o-xylene, m-xylene, and p-xylene. More stringent technology-based effluent limitations are applied in this General Order.

4. WQBEL Calculations

a. This General Order includes WQBELs for Priority Pollutants, constituents with numeric water quality objectives discharged to specific water bodies, aluminum, ammonia, iron, manganese, nitrate, nitrite, pH, pesticides, and total residual chlorine. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections VI.C.4.b through e of this Attachment, directly below.

b. **Effluent Concentration Allowance.** For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from section 1.4 of the SIP:

ECA = C + D(C – B) where C>B, and
ECA = C where C≤B

where:

ECA = effluent concentration allowance
D = dilution credit
C= the priority pollutant criterion/objective
B= the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples.

c. **Primary and Secondary MCLs.** For non-priority pollutants with primary MCLs to protect human health (e.g., nitrate plus nitrite), the AMEL is set equal to the primary MCL and the MDEL is calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

For non-priority pollutants with secondary MCLs that protect public welfare (e.g., taste, odor, and staining), WQBELs were calculated by setting the LTA equal to the secondary MCL and using the AMEL multiplier to set the AMEL. The MDEL was calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

d. **Aquatic Toxicity Criteria.** For constituents with acute and chronic aquatic toxicity criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The ECAs are converted to equivalent long-term averages (i.e., LTA_{acute} and $LTA_{chronic}$) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

e. **Human Health Criteria.** For constituents with human health criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The AMEL is set equal to the ECA and the MDEL is calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

$$AMEL = mult_{AMEL}[\min(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic})]$$

$$MDEL = mult_{MDEL}[\min(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}})]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where:

$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting acute ECA to LTA_{acute}
M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objectives, this General Order requires dischargers of liquid mine waste, treated effluent, or discharges greater than or equal to 120 days or 0.25 MGD to conduct whole effluent toxicity testing annually for chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment C, section V). This General Order also contains numeric effluent limitations for acute and a narrative effluent limitation for chronic toxicity. This General Order, in section IX.C.3, requires the Discharger to implement BMPs to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity and to maintain a BMP Plan as described in Attachment C.

a. **Acute Aquatic Toxicity.** The Basin Plans contain a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*." (Basin Plan for the Sacramento and San Joaquin River Basins at page III-8.00 and Basin Plan for the Tulare Lake Basin at page III-6) The Basin Plans also state that, *"…effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate…*".

For priority pollutants, the SIP dictates the procedures for conducting the RPA. Acute toxicity is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Therefore, due to the site-specific

conditions of the potential discharges to be covered under this General Order, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "*State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available…A permitting authority might also determine that WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's discharging to contact recreational waters).*" Acute toxicity effluent limits are required to ensure compliance with the Basin Plan's narrative toxicity objective.

U.S. EPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc."* Accordingly, effluent limitations for acute toxicity have been included in this General Order as follows:

> **Acute Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
>
> Minimum for any one bioassay 70%
>
> Median for any three consecutive bioassays 90%

Only discharges that do not demonstrate acute toxicity are eligible for this General Order; therefore, there is an assumption that short term and/or low flow discharges (less than 120 days or 0.25 MGD) do not have reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective and the numeric limitations shown above.

Because short term and/or low flow discharges authorized by this General Order are low threat discharges, they are not expected to contribute to acute toxicity. Therefore, acute WET testing is not required for these discharges in this General Order.

Discharges of liquid mine waste or with treatment authorized by this General Order are expected to have the potential to be a threat to water quality. The potential impacts of acute toxicity are based on short-term exposure. Attainment

of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing, which is generally protective of acute aquatic toxicity.

b. **Chronic Toxicity.** The Basin Plans contain a narrative toxicity objective that states, “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” (Basin Plan for the Sacramento and San Joaquin River Basins at section 3.1.20 and Basin Plan for the Tulare Lake Basin at section 3.1.18.) Only discharges that do not demonstrate chronic toxicity are eligible for this General Order; therefore, there is an assumption that eligible discharges do not exhibit reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan’s narrative toxicity objective.

Discharges that cause chronic toxicity in the receiving water are not eligible for coverage under this General Order; therefore, as required in Section XI.C.2.b, if the discharge demonstrates a pattern of toxicity is causing chronic toxicity in the receiving water, the Discharger is required to submit a ROWD for issuance of an individual NPDES permit.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations

40 C.F.R section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This General Order does not includes effluent limitations expressed in terms of mass and concentration, pursuant to the exceptions to mass limitations provided in 40 CF.R. section 122.45(f)(1) because the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

However, when a Discharger is granted an intake water credit for a pollutant the effluent limits for that pollutant are based on a no net addition of the pollutant. Therefore, the effluent limits are based on mass (i.e., the pollutant mass in the effluent may not exceed the pollutant mass in the intake water).

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45 (d) requires maximum daily and average monthly limitations for all dischargers unless impracticable.

3. Satisfaction of Anti-Backsliding Requirements - Effluent Limitation Modifications in the NOA

If new monitoring results show that a constituent is not detected for a minimum of one year, then the NOA may be modified to remove or modify the effluent limitation

for that constituent in accordance with this General Order and as allowed under CWA section 402(o)(2).

CWA section 402(o)(2). CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The NOA may remove or relax effluent limitations where the removal or relaxation complies with any of these exceptions.

One of these exceptions, CWA 402(o)(2)(B)(i), allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Updated information that may be used to satisfy this exception include updated effluent and receiving water monitoring data collected subsequent to the issue date of the NOA that indicates that the discharge no longer exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives/criteria.

4. Antidegradation Policies

The permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Due to the expected short-term duration, low volume, and/or low threat nature of the wastewater regulated under this General Order, the impact on existing water quality will be insignificant. This Order requires monitoring of all wastewater proposed for discharge prior to allowing the discharge. This Order requires all wastewater that requires treatment to be monitored before discharge is allowed. This Order requires all discharges of liquid mine waste, treated effluent, and discharges greater than or equal to 120 days or 0.25 MGD to conduct chronic toxicity testing. This Order requires all discharges of liquid mine waste and discharges with treatment to develop and implement Best Management Practices in order to prevent the generation and potential release of pollutants to receiving waters. If, however, the Central Valley Water Board, subsequent to review of any application, finds that the impact of a discharge will be significant, then authorization for coverage under this General Order will be denied and coverage under an individual permit will be required (including preparation of an anti-degradation analysis).

Some permanent changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the NOA by the Executive Officer.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g., submittal of a modified NOI to the Executive Officer), including applicable

laboratory analyses, the Executive Officer may issue a revised NOA for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary, with the exception of salinity, and/or a discharge no longer qualifies for this Order, the Discharger must apply for an individual NPDES permit.

a. **Removal of Existing Effluent Limitations.** This General Order allows updated NOAs to remove existing effluent limitations for constituents in which updated monitoring data demonstrate that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water. The Central Valley Water Board finds that the modification of the NOA for removal of effluent limitations will not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

b. **Intake Water Credits.** This General Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Some Dischargers may be granted an intake water credit to account for pollutants in the intake water. Implementation of an intake water credit in accordance with the SIP allows a Discharger to discharge a mass and concentration of the intake water pollutants that is no greater than the mass and concentration found in the facility's intake water. If a Discharger adds mass of a pollutant to its waste stream, an equal or greater mass must be removed prior to discharge, resulting in no net addition of the pollutant in the discharge compared to the intake water. This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. The permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

c. **Salt Control Program, Conservative Pathway.** This General Order requires all wastewater dischargers to submit a Notice of Intent for the Salt Control Program to determine the applicability of the either the Alternative or Conservative Pathway under the Salt Control Program or whether the discharge already consistently applies with water quality objectives for salinity.

   For discharges that are determined to consistently comply with water quality objectives specified in the Basin Plan Amendments for CV-SALTS, the impact on

existing water quality is determined to be insignificant and will be specified in the NOA.

Discharges with an average monthly electrical conductivity concentration less than 700 µmhos/cm or an average annual electrical conductivity concentration less than 900 µmhos/cm for receiving waters with the AGR or MUN beneficial use, respectively, may enroll under the Conservative Pathway of the Salt Control Program. The Central Valley Water Board finds that discharges below the respective water quality objective and enrolling in the Conservative Pathway may produce minor effects which will not result in significant reduction of water quality since permitted discharges are considered relatively pollutant-free and pose a low or limited threat to water quality. Specific findings from the antidegradation analysis shall be summarized in the NOA.

Discharges permitted under this General Order are consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy. For discharges below the respective water quality objective of 700 µmhos/cm or 900 µmhos/cm for receiving waters with the AGR or MUN beneficial use and above the receiving water electrical conductivity concentration, this General Order provides for an increase in the volume and mass of pollutants discharged, as specified in the NOA. The increase will not cause a violation of water quality objectives or significant impacts on aquatic life. Any change in water quality that is expected to occur as a result of the issuance of this General Order will be consistent with the maximum benefit to the people of the state and will not unreasonably affect present and anticipated beneficial uses. Furthermore, compliance with the requirements in this General Order will result in the use of best practicable treatment or control of the discharge.

5. Summary of Final Effluent Limitations.

See Limitations and Discharge Requirements Section V.A for Water Quality-Based Effluent Limitations and Section V.B for Technology-Based Effluent Limitations. Applicable screening levels are in Attachment I.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

VII. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that “[t]he numerical and narrative water quality

objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This General Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for ammonia, bacteria, biostimulatory substances, color, chemical constituents, chronic toxicity, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

a. **Bacteria**. On 7 August 2018 the State Water Board adopted Resolution No. 2018-0038 establishing Bacteria Provisions, which are specifically titled "Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Bacteria Provisions and a Water Quality Standards Variance Policy" and "Amendment to the Water Quality Control Plan for Ocean Waters of California—Bacteria Provisions and a Water Quality Standards Variance Policy." The Bacteria Water Quality Objectives established in the Bacteria Provisions supersede any numeric water quality objective for bacteria for the REC-1 beneficial use contained in a water quality control plan before the effective date of the Bacteria Provisions.

   The Bacteria Water Quality Objectives correspond with the risk protection level of 32 illnesses per 1,000 recreators and use E. coli as the indicator of pathogens in freshwaters and enterococci as the indicator of pathogens in estuarine waters and ocean waters.

   The Bacteria Provisions provide that where a permit, waste discharge requirement (WDR), or waiver of WDR includes an effluent limitation or discharge requirement that is derived from a water quality objective or other guidance to control bacteria (for any beneficial use) that is more stringent than the Bacteria Water Quality Objective, the Bacteria Water Quality Objective would not be implemented in the permit, WDR, or waiver of WDR. This standard has not been met in this Order; therefore, the Bacteria Water Quality Objective has been implemented as a receiving water limitation.

   The bacteria receiving water limitation in this Order has been established based on the Bacterial Water Quality Objective for inland surface waters, which requires the six-week rolling geometric mean of Escherichia coli (E. coli) shall not exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

B. Groundwater – Not Applicable

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this General Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page:
(https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

2. Special Studies and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” (Basin Plan for the Sacrament and San Joaquin River Basins at page III-8.00 and Basin Plan for the Tulare Lake Basin at page III-6.) If through chronic WET testing it is demonstrated that the discharge exceeds the numeric toxicity trigger, the Discharger is required to submit a ROWD for application of an individual NPDES permit.

The Monitoring and Reporting Program of this Order requires chronic WET monitoring for demonstration of compliance with the narrative toxicity objective. In addition to WET monitoring, this provision includes a numeric toxicity monitoring trigger, requirements for accelerated monitoring, and instructions if a pattern of toxicity is demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of >1 TUc, or as specified by the Executive Officer in the NOA (where TUc = 100/NOEC), is applied in the provision, because this General Order does not allow any dilution for the chronic condition.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is toxicity before proceeding with further requirements. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of two additional chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity to determine if the Discharger is eligible for coverage under this Order. To continue coverage under this Order, the Discharger must demonstrate to the satisfaction of the Executive Officer that the discharge is not causing chronic toxicity in the receiving water.

3. Best Management Practices and Pollution Prevention

a. **Best Management Practices.** Because of the expected diversity of limited threat discharges covered by this General Order, specific technology-based effluent limitations for the universe of toxic compounds that could be found in wastewater have not been established. As allowed under 40 C.F.R. section 122.44(k).

b. **Salinity Evaluation and Minimization Plan.** For projects with discharge greater than or equal to 180 days, as specified in the NOA, the Discharger shall prepare or continue to implement a salinity evaluation and minimization plan to identify and address sources of salinity discharged from the Facility. The plan shall be completed and submitted to the Central Valley Water Board by the due date in the NOA. Under limited circumstances when groundwater is naturally high in salinity and source control is infeasible, for example construction dewatering projects, the requirement to submit a Salinity Evaluation and Minimization Plan may not be specified in the NOA.

If the Discharger has an existing salinity evaluation and minimization plan, the Discharger shall evaluate the effectiveness of the salinity evaluation and minimization plan and provide a summary with the Notice of Intent.

Furthermore**, for enrollees under the Alternative Salinity Permitting Approach of the Salt Control Program**, if the effluent annual average calendar

year electrical conductivity concentration exceeds the respective performance-based electrical conductivity trigger in Table 15 of this General Order, 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 exceeds the performance-based electrical conductivity trigger.

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Dischargers Applying Alum for Phosphorus Sequestration

a. **Application Schedule.** The Discharger shall provide a phone number or other specific contact information to all persons who request the Discharger's application schedule. The Discharger shall provide the requester with the most current application schedule and inform the requester if the schedule is subject to change. Information may be made available by electronic means, including posting prominently on a well-known website.

b. **Public Notice Requirements.** Every calendar year, at least 15 days prior to the first application of algaecide or aquatic herbicide, the Discharger shall notify potentially affected public agencies. The Discharger shall post the notification on its website if available. The notification shall include the following information:

i. Statement of the discharger's intent to apply algaecide or aquatic herbicide(s);

ii. Name of algaecide and aquatic herbicide(s);

iii. Purpose of use

iv. General time period and locations of expected use;

v. Any water use restrictions or precautions during treatment;

iv. A phone number that interested persons may call to obtain additional information from the Discharger.

c. **Alum Application Plan (AAP).** Dischargers shall submit an AAP with their Notice of Intent documents. Elements of the AAP are described in Attachment K.

d. **AAP Processing, Approval and Modifications.** Upon receipt of the AAP, staff will review for completeness and applicability for this General Permit and post on the Board's website. If no comments are received and staff deem the AAP complete, the AAP will be incorporated into the NOA. If comments are received, staff will work with the Discharger to address comments to allow for NOA issuance as expeditiously as possible.

Changes to the AAP must be submitted to NPDES permitting for approval and may require additional public comment prior to issuance of an amended NOA

6. Compliance Schedules – Not Applicable

7. Other Special Provisions

a. This General Order requires collected screenings and other solids removed from liquid wastes to be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23 of the CCR and approved by the Executive Officer.

b. This Order also requires any proposed change in solids use or disposal practice to be reported to the Executive Officer and U.S. EPA Regional Administrator at least 90 days in advance of the change.

IX. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment C of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP.

A. Influent Monitoring for Dischargers with Intake Water Credits

1. Dischargers that have been granted an intake water credit in the NOA must monitor the influent for each applicable pollutant. Influent samples must be taken concurrent with effluent samples. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.

2. Where multiple intake water sources are used and an intake water credit is granted, the influent flow from each source must be monitored to calculate a flow-weighted influent concentration. In accordance with the SIP, the pollutant from the receiving water shall be assumed to have a concentration that is no greater than the concentration in the Discharger intake water. Therefore, monitoring of the intake water from the receiving body must be performed for each pollutant. The pollutant concentrations from intake sources other than the receiving water are assumed to have a concentration that is no greater than the most stringent applicable water quality objective. Therefore, monitoring for hardness of the intake water from the receiving water body is also required when the effluent is monitored to derive the most stringent water quality objective for one or more of the hardness-dependent metals contained in the CTR (cadmium, chromium III, copper, lead, nickel, silver, and zinc) and/or applicable Basin Plan. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. The Executive Officer will specify varying monitoring frequencies in the discharge-specific NOA because of the expected diversity of discharges and the uncertainty of the length of time associated with each discharge. The following effluent monitoring requirements may be included in the NOA:

   a. Monitoring for flow (when discharging).

   b. Monitoring for electrical conductivity and/or total dissolved solids to characterize the salinity of the effluent.

   c. Monitoring for priority pollutants to determine compliance with applicable effluent limitations. Monitoring for hardness is also required if effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and/or zinc are applicable.

   d. Monitoring for pH using grab samples to determine compliance with effluent limitations, if applicable.

   e. Monitoring for total residual chlorine using grab samples is established for all low threat discharges and superchlorination project discharges to determine compliance with effluent limitations. As discussed in section VI.C.3 of this Fact Sheet, the Central Valley Water Board acknowledges the complications of achieving relatively low RLs in field locations. This General Order allows Dischargers to use handheld monitoring devices to monitor total residual chlorine in the effluent. This General Order also requires Dischargers to utilize a method capable of achieving an RL of 0.1 mg/L until the State Water Board adopts a state-wide policy with a specified reporting level achievable in the field and laboratory. The RL of 0.1 mg/L represents a level that hand-held field meters are capable of achieving.

   f. Monitoring for other constituents of concern listed in Table I-2 to determine compliance with applicable effluent limitations.

3. Dischargers that have been granted an intake water credit in the NOA must monitor the effluent for each applicable pollutant. Effluent samples must be taken concurrent with influent samples. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the effluent pollutant mass and concentration.

4. Water Code section 13176, subdivision (a), states: “The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.” The DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

5. Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code sections 13370, subd. (c), 13372, 13377.). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code section 13372, subd. (a).) Lab accreditation is not required for field tests such as tests for color, odor, turbidity, pH, temperature, dissolved oxygen, electrical conductivity, and disinfectant residual. Due to the variety of discharge locations that may be covered under this General Order, it may be both legally and factually impossible for the Discharger to comply with section 13176 for constituents with short holding times.

C. Whole Effluent Toxicity Testing Requirements

1. **Low Volume Exemption from Acute and Chronic Toxicity Monitoring.** Individuals and miscellaneous public and private businesses often need to discharge clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. These discharges are typically low volume discharges and/or short-term in nature (less than 0.25 million gallons and/or less than 120 days). The SIP, in section 1.3, Step 8, paragraph 2, states that the Central Valley Water Board may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from certain monitoring requirements. In this General Order, discharges less than 0.25 million gallons or less than 120 days are not required to conduct acute and chronic toxicity monitoring.

2. **Acute Toxicity**. Because discharges authorized by this General Order are low/limited threat and a chronic aquatic toxicity test is generally protective of both chronic and acute aquatic toxicity, acute WET testing is not required in this General Order. The 96-hour bioassay testing may be required by the Executive Officer to demonstrate compliance with the effluent limitation for acute toxicity, as specified in the NOA. The frequency of testing shall be every six months or as specified in the NOA from the Executive Officer.

3. **Chronic Toxicity**. Low volume and/or short-term in nature (less than 0.25 million gallons or less than 120 days) are not expected to contribute to chronic toxicity; therefore, chronic WET testing is not required for these discharges in this General Order. In order to demonstrate compliance with the Basin Plan’s narrative toxicity objectives, chronic WET testing may be specified in the NOA for dischargers that are greater than or equal to 0.25 million gallons or 120 days. The chronic WET testing shall be conducted per the Monitoring and Reporting Program (Attachment C, section V).

D. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream. Applicable receiving water monitoring will be specified in the NOA considering the site-specific conditions of the discharge.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements – Not Required

X. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for limited threat discharges to waters of the United States. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through posting on the Central Valley Water Board's website on 6 December 2021.

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website (http://www.waterboards.ca.gov/centralvalley/board_info/meetings/)

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on **23 December 2021**.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 17/18 February 2022
Time: 8:30 a.m.
Location: Online

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDR's, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

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 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., within 30 calendar days of the date of adoption of this Order at the following address, 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:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

Instructions on how to file a petition for review (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) are available on the Internet.

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

All Notices of Applicability may be accessed through the Central Valley Water Board Info Page (http://www.waterboards.ca.gov/centralvalley/board_info/)

For additional information or for questions regarding this General Order, please find the appropriate contact for your county from the list under "NPDES Permitting Contacts" (https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/contacts/).

ATTACHMENT E – REQUEST FOR TERMINATION OF COVERAGE

PROJECT NAME _____

_____

PROJECT COUNTY _____

GENERAL ORDER NUMBER R5-2022-0006-03 _____

WDID NUMBER _____

CIWQS NUMBER _____

DISCHARGE STOP DATE _____

TOTAL VOLUME OF DISCHARGE _____

TOTAL ELAPSED TIME OF DISCHARGE _____

CERTIFICATION
"I certify under penalty of law that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. The project named above is terminated. There is no longer a discharge to surface water. The treatment system (if applicable) has been dismantled. I request a Notice of Termination from the Executive Officer. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment."

A. Printed Name: _____

B. Signature: _____ **C. Date:** _____

D. Title: _____

E. Company Name: _____

F. Company Address: _____

Please complete this form and email to the appropriate Regional Board permitting contact at the link below:

Waste Discharges to Surface Water – NPDES Program
(https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/contacts/)
In addition, send a copy (cc) to the following email address:

centralvalleysacramento@waterboards.ca.gov

Please address the email to the attention of the NPDES Section.

ATTACHMENT F – POLLUTION PREVENTION AND MONITORING AND REPORTING PLAN (PPMRP)

Water suppliers that have or propose to have multiple discharge points covered by this General Order are required in section II.A.2.b of this Order to develop a site-specific Pollution Prevention and Monitoring and Reporting Plan (PPMRP) and submit the document with the Notice of Intent. The following information must be included in the PPMRP:

1. POLLUTION PREVENTION PLAN

A. Distribution System. Provide a description and a map of the distribution system including the boundaries of the geographical area where discharges may occur (e.g., service area).

B. Potential Discharge Locations. Identify actual or approximate locations of fire hydrants, supply wells, pump stations, and pressure relief valves. Include a table and/or map of potential discharge locations.

C. Pollutant Types. Identify the pollutants that could potentially be discharged (e.g., total suspended solids, settable solids, chlorine, etc.).

D. Flow Rate. Identify the range of expected instantaneous discharge flow rates and/or total daily flow volume.

E. Receiving Waters. Identify the receiving water (e.g., drainage canal, creek, or river) the discharges could directly enter and the nearest named receiving water.

F. Treatment Systems. Identify treatment systems, equipment, or procedures used to remove chlorine and solids from discharges and to control pH.

G. Spill Contingency Plans. Address unintentional releases/discharges of water (whether chlorinated or dechlorinated) such as water discharges from breaks in the system (including, but not limited to: fire hydrant, back-flow preventers, and pumps). A discharge from a water main pressure relief valve that is beyond the typical volume discharged from a well-maintained pressure relief valve is considered a spill. In addition, include plans for the capture and containment of the released volume, dechlorination of released volume, temporary procedures to stop the unintentional discharge until a permanent repair, and permanent repair of water system components that fail.

H. Operation and Maintenance (O&M) Procedures. Include procedures that would prevent unintentional releases, such as pressure relief valve maintenance, planned water main replacement, water main corrosion prevention, and pump station maintenance, power supply maintenance. O&M procedures also include those procedures to prevent discharges of other pollutants (such as chlorine and dechlorinating agents) during an intentional or unintentional release of water and in the course of water system construction, repair and maintenance.

I. Inspections. Include a plan for regularly scheduled inspections to check the integrity of water supply system components (pumps, pressure relief valves, water pipes and connections, etc.) to prevent unintentional and accidental discharges of water (chlorinated or dechlorinated).

J. Equipment/Supplies. Identify equipment and supplies that are needed to 1) properly operate and maintain a water supply system to prevent unintentional discharges; 2) dechlorinate, contain and control intentional discharges; 3) prevent discharge of other pollutants (chlorine, dechlorinating agents, sediment, etc.) during intentional and unintentional discharges and during water supply system construction, repair and maintenance; and 4) quickly and effectively respond to dechlorinate, contain and control unintentional discharges.

K. Training. Identify training activities to 1) ensure staff are adequately prepared to properly operate and maintain a water supply system to prevent unintentional discharges; 2) dechlorinate, contain and control intentional discharges; 3) prevent discharge of other pollutants (chlorine, dechlorinating agents, sediment, etc.) during intentional and unintentional discharges and during water supply system construction, repair and maintenance; and 4) quickly and effectively respond to dechlorinate, contain and control unintentional discharges.

L. Erosion Control. Identify equipment and supplies that are needed to control and contain intentional and unintentional discharges of water to prevent erosion of soil and sediment which can be transported with the discharge.

II. MONITORING AND REPORTING PROGRAM

Develop a representative sampling and analysis program. Dischargers are not required to sample all discharges if reasonable assurance is provided that the discharges will comply with requirements. Provide rationale for selection of the effluent and receiving water monitoring plan. The sampling and analysis program shall include the following:

A. Sampling Methods. Include a description of how effluent and receiving water samples will be collected (e.g., grab, composite, continuous, metered, totalizer) and preserved/delivered within the holding time to the analytical laboratory.

B. Sampling Locations. Identify effluent sampling locations (e.g., at each well or fire hydrant, or at a subset of well or fire hydrant locations) and where samples will be taken (e.g., from fire hydrant, 10 feet from source, at effluent of settling basin).

In addition, identify all receiving water locations where samples can be taken and describe where at those locations samples will be taken (e.g., 10 feet upstream and downstream of storm drain outfall into the drainage channel).

C. Sampling Frequency. Identify the frequency that effluent and receiving water samples will be taken (e.g., during each discharge, every fourth discharge, each well discharge). In addition, specify when during a discharge the receiving water samples will be collected (consider time within the storm drain system).

D. Analysis Methods. Identify the constituents/parameters that will be monitored and/or analyzed and the method of analysis (e.g., meter EPA method, instrument, laboratory). In addition, identify Quality Assurance/Quality Control procedures, including instrument calibration.

E. Inspection Plans and Visual Observations. Describe how receiving waters will be inspected to obtain and record visual observations for discoloration, stream bottom deposits, etc.

F. Rationale. Explain the reason for the effluent and receiving water sampling methods, locations, and frequencies that were chosen and why these will provide representative samples. For example, if a sample will not be taken at the identified locations during each discharge, describe criteria for deciding when a sample will be taken at that location.

The sampling and analysis program must be developed and implemented in accordance with the General Monitoring Provisions, Other Monitoring Requirements, and Reporting Requirements contained in sections I, IX, and X, respectively, of the Monitoring and Reporting Program (Attachment C).

ATTACHMENT G - APPLICATION FOR INTAKE WATER CREDIT FOR INDIVIDUAL POLLUTANT

1. Is the primary source of water for the facility operation the same as the water body that receives the facility's effluent discharge?

☐ **No -** You do not need to complete the remainder of Attachment G; the facility is not eligible for an intake water credit. EXIT

☐ **Yes –** Continue to Question 2 below.

2. Does the facility effluent discharge water exceed applicable numeric water quality criteria?

☐ **No -** You do not need to complete the remainder of Attachment G; treatment is not required before discharge. EXIT

☐ **Yes – Choose one of the following options:**

☐ **Treatment will be implemented.** You do not need to complete the remainder of this section. EXIT

☐ **Apply for intake water credit for the following pollutant:**

_____

3. Does the facility use multiple water supplies?

☐ **No -** You do not need to complete the remainder of Attachment G; treatment is not required before discharge. EXIT

☐ **Yes – Complete the following sections a and b before moving on to question 4:**

a. Describe the conditions that trigger the use of the supplemental water supply and the frequency and duration that the supplemental water supply is used.

_____
_____
_____
_____

b. Complete the following table and/or attach additional information as necessary:

Water Body Name/Description	**Maximum Flow** (Specify Units)	**Minimum Flow** (Specific Units)
Intake Water Source Name/Description: _____		
Intake Water Source Name/Description: _____		
Intake Water Source Name/Description: _____		
Receiving Water Name: _____	**Not Required**	**Not Required**

4. Does the facility alter the pollutant for which you are seeking an intake water credit chemically or physically?

☐ **No –** Continue to question 5.

☐ **Yes –** Describe how the facility alters the pollutant and continue to question 5:

_____
_____
_____
_____

5. Would the pollutant for which you are seeking an intake water credit have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effects had it not been diverted to your facility? Explain below and continue to question 6.

_____
_____
_____
_____

6. Does the timing or location of your discharge cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body? Explain below.

_____
_____
_____
_____

ATTACHMENT H – (RESERVED)

ATTACHMENT I – SCREENING LEVELS FOR LIMITED THREAT DISCHARGES

I. Selection of Monitoring for Submittal with NOI

Dischargers seeking authorization to discharge under this General Order shall sample and analyze a representative sample of the wastewater or representative samples of receiving water (for alum application baseline monitoring only), for the constituents contained in the appropriate column in Table I-1. The analytical results for wastewater samples shall be compared to the screening levels in Sections II and III of this attachment. Discharges that exceed screenings levels in Sections II and III may require effluent limitations and treatment to remain eligible for enrollment under this General Order. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants in order to evaluate compliance with the screening level. All analytical results and water quality criteria comparisons shall be submitted in the NOI.

Table I-1. Selection of Monitoring for Submittal with NOI

Constituents and Parameters	Drinking Water Supply	Potable or Other Chlorinated Wastewaters	Groundwater Source	Surface Water Source	Process Water	Liquid Mine Waste	VOC Remediation	Petroleum Fuel Projects	Baseline Monitoring for Alum Applications	Other
CTR Priority Pollutants (See Table I-3 below)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
• Dissolved Oxygen • Hardness • pH • Temperature • Electrical Conductivity (@ 25 ºC)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (only pH, Hardness and Electrical Conductivity)	Yes
• Biochemical Oxygen Demand (BOD) • Total Suspended Solids (TSS) • Turbidity	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Constituents and Parameters	Drinking Water Supply	Potable or Other Chlorinated Wastewaters	Groundwater Source	Surface Water Source	Process Water	Liquid Mine Waste	VOC Remediation	Petroleum Fuel Projects	Baseline Monitoring for Alum Applications	Other
Known Parameters of Concern	Yes	Yes	Yes	Yes	Yes	Yes	Yes (VOC Constituents, see Table I-5)	Yes (Petroleum Fuel Constituents, see Table I-6)	Yes (Total Phosphorous and Dissolved Aluminum)	Yes
Un-ionized Ammonia Nitrogen (as N) (only for the Tulare Lake Basin)	No	No	Yes	No	Yes	No	No	No	No	Yes
Chlorine, Total Residual	Yes	Yes	No	No	Yes	No	No	No	No	No
• Aluminum, Total • Dissolved Organic Carbon • Iron, Total • Manganese, Total	No	No	Yes	No	Yes	Yes	No	No	Yes (Total Aluminum and Dissolved Organic Carbon only)	Yes

Table I-1 Notes:

1. For Drinking Water Supply, the SIP, Section 5.3.2, contains a categorical exception to priority pollutant monitoring requirement for drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code.
2. Monitoring shall be conducted on a representative sample of the wastewater.
3. Analysis of known contaminants are required for those contaminants known to be present in the wastewater but are not listed in Table I-2 or I-3. Monitoring for VOC Constituents in Table I-5 and Petroleum Fuel Constituents in Table I-6 is required to be submitted with the NOI for Petroleum Fuel Projects and VOC Remediation, respectively.
4. **Un-ionized Ammonia Nitrogen (as N)** monitoring is only applicable for discharges within the Tulare Lake Basin.
5. **Aluminum, Total, Iron, Total, and Manganese, Total.** Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for aluminum, iron, and manganese.
6. **Iron, Total and Manganese, Total.** Sampling is only required if the discharge will last more than one year from the project start date (applies whether discharge is intermittent or continuous).

II. Applicable Water Quality Criteria

A. Screening Levels for non-Priority Pollutant Constituents and Parameters of Concern. Dischargers required to sample and analyze any or all of the constituents contained in Table I-2 shall compare the results to the corresponding applicable criteria (MUN or non-MUN) and shall submit the results as part of the application (Notice of Intent, see Attachment J). Any exceedance of the applicable water quality criteria in Table I-2 may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer.

Table I-2. Screening Levels for Non-Priority Pollutant Constituents and Parameters of Concern

Constituent/Parameter	Units	Screening Levels (Based on MUN)	Screening Levels (Based on No MUN)
Aluminum, Total	µg/L	200	See Tables I-3A through I-3I
Un-ionized Ammonia (as N)	mg/L	0.025	0.025
Iron, Total	µg/L	300	--
Manganese, Total	µg/L	50	--
Nitrate plus Nitrite (total as N)	mg/L	10	--
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	10
pH	standard units (SU)	6.5 – 8.5	6.5 – 8.5
Settleable Solids	mL/L	0.1	0.1
Specific Conductance (EC)	µmhos/cm	1,600	--
Total Suspended Solids	mg/L	10	--
Turbidity	NTU	5	5

Table I-2 Notes:

1. **Constituents/Parameters** shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).
2. **Aluminum, Total.** Using data for dissolved organic carbon, pH, and hardness, discharges required to sample and analyze for aluminum will be compared to whichever is more stringent between the criteria specified in Tables I-2A through I-2I. Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for aluminum.
3. **Iron, Total and Manganese, Total.** MUN Criteria is based on the Secondary Maximum Contaminant Levels for taste and odor. The criteria are only applicable for discharges lasting more than one year from project start date (both continuous and intermittent). Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for iron and manganese.
4. **pH.** The criteria for pH of 6.5 SU to 8.5 SU is for discharges within the Sacramento San Joaquin Basin. However, pH criteria for Goose Lake is 7.5 SU to 9.5 SU, and the Tulare Lake Basin is 6.5 SU to 8.3 SU.
5. **Un-ionized Ammonia (as N).** Only applicable for discharges within the Tulare Lake Basin.

1. **Aluminum Screening Levels.** The screening levels contained in Tables I-2A through I-2I are based on pH, dissolved organic carbon (DOC), and hardness (H). For discharges with hardness concentrations less than 100 mg/L, screening levels have been segmented into 25 mg/L increments. For discharges with hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, screening levels have been segmented into 50 mg/L increments. For discharges with hardness concentrations greater than or equal to 200 mg/L but less than 400 mg/L, screening levels have been segmented into 100 mg/L increments. For each hardness segment, the mid-point of the segment was used to determine the corresponding screening level.

   Screening levels have also been segmented into increments based on pH. For discharges with pH greater than or equal to 6.5 SU but less than 7.0 SU, screening levels have been segmented 0.1 SU increments. For discharges with pH greater than or equal to 7.0 SU but less than 8.0 SU, screening levels have been segmented into 0.2 increments. For discharges with pH greater than or equal to 8.0 SU but less than 8.5 SU, screening levels have been segmented into 0.5 increments. The water quality objectives for pH for is 6.5 SU to 8.5 SU discharges within the Sacramento San Joaquin Basin and 6.5 SU to 8.3 SU for discharges within the Tulare Lake Basin. However, the pH criteria for Goose Lake is 7.5 to 9.5. Screening levels for pH greater than 8.5 SU are applicable for discharges to Goose Lake only and are calculated using the maximum pH of 9.5 SU. For each pH segment, the mid-point of the segment was used to determine the corresponding screening level. Each Table I-2A through I-2I represents a range of DOC, for which, the mid-point was used to determine the corresponding screening level.

   Results can be evaluated from samples that have been passed through a 1.5-micron filter to evaluate compliance with the Secondary MCL criteria for aluminum. If the applicable criterion from Tables I-2A through I-2I is more stringent than the Secondary MCL of 200 µg/L for aluminum in Table I-2 for receiving waters with the MUN beneficial use, then the appropriate calculated screening level from Table I-2A through I-2I shall be used in lieu of the Secondary MCL.

Table I-2A. Screening Levels for Aluminum, Total – 0 mg/L ≤ DOC < 1 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	93	140	160	170	190	210	230	250	250
6.6 ≤ pH < 6.7	110	160	180	190	210	230	250	270	280
6.7 ≤ pH < 6.8	130	180	200	220	240	250	270	290	300
6.8 ≤ pH < 6.9	150	210	230	250	260	280	300	320	330
6.9 ≤ pH < 7.0	180	240	260	280	300	310	330	350	360
7.0 ≤ pH < 7.2	230	290	320	340	360	370	390	410	410
7.2 ≤ pH < 7.4	310	390	420	440	460	470	490	500	500
7.4 ≤ pH < 7.6	400	500	540	570	590	600	610	620	630
7.6 ≤ pH < 7.8	450	640	680	700	740	760	770	780	780
7.8 ≤ pH < 8.0	490	690	800	860	890	910	930	950	960
8.0 ≤ pH < 8.5	540	660	730	780	840	900	1,000	1,100	1,100
pH > 8.5	290	260	250	240	230	230	220	210	210

Table I-2B. Screening Levels for Aluminum, Total – 1 mg/L ≤ DOC < 2 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	160	230	260	290	320	340	380	410	430
6.6 ≤ pH < 6.7	190	250	290	310	340	360	400	430	450
6.7 ≤ pH < 6.8	220	280	310	340	360	390	420	450	470
6.8 ≤ pH < 6.9	250	310	340	370	390	410	440	480	490
6.9 ≤ pH < 7.0	280	350	380	400	420	440	470	510	520
7.0 ≤ pH < 7.2	340	410	440	460	480	500	520	550	560
7.2 ≤ pH < 7.4	450	520	540	550	570	590	600	620	630
7.4 ≤ pH < 7.6	590	660	670	680	690	700	710	710	720
7.6 ≤ pH < 7.8	750	840	850	850	850	850	840	840	830
7.8 ≤ pH < 8.0	960	1,000	1,100	1,100	1,000	1,000	1,000	1,000	990
8.0 ≤ pH < 8.5	1,000	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,300
pH > 8.5	560	500	480	460	450	430	420	410	400

Table I-2C. Screening Levels for Aluminum, Total – 2 mg/L ≤ DOC < 3 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	210	290	340	370	400	440	480	520	550
6.6 ≤ pH < 6.7	240	320	360	390	420	450	500	540	560
6.7 ≤ pH < 6.8	270	340	380	410	440	470	520	560	580
6.8 ≤ pH < 6.9	300	380	410	440	470	500	540	580	600
6.9 ≤ pH < 7.0	340	410	450	470	500	530	570	600	620
7.0 ≤ pH < 7.2	400	470	500	520	550	580	610	640	650
7.2 ≤ pH < 7.4	520	570	600	610	630	650	680	700	710
7.4 ≤ pH < 7.6	670	710	720	730	730	740	760	780	780
7.6 ≤ pH < 7.8	860	880	880	880	870	870	860	870	870
7.8 ≤ pH < 8.0	1,100	1,100	1,100	1,100	1,000	1,000	1,000	980	970
8.0 ≤ pH < 8.5	1,500	1,500	1,500	1,500	1,500	1,400	1,400	1,300	1,300
pH > 8.5	760	680	650	630	610	590	570	550	540

Table I-2D. Screening Levels for Aluminum, Total – 3 mg/L ≤ DOC < 4 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	250	340	390	430	470	510	560	620	640
6.6 ≤ pH < 6.7	280	370	410	450	480	520	580	630	650
6.7 ≤ pH < 6.8	310	390	440	470	500	540	590	640	660
6.8 ≤ pH < 6.9	340	420	470	490	530	570	610	660	680
6.9 ≤ pH < 7.0	380	460	500	520	560	590	640	670	690
7.0 ≤ pH < 7.2	450	520	550	570	600	640	670	710	720
7.2 ≤ pH < 7.4	560	610	640	650	680	710	730	760	760
7.4 ≤ pH < 7.6	710	740	750	760	770	790	810	820	820
7.6 ≤ pH < 7.8	900	900	900	890	890	890	900	900	900
7.8 ≤ pH < 8.0	1,100	1,100	1,100	1,100	1,000	1,000	1,000	990	990
8.0 ≤ pH < 8.5	1,600	1,600	1,500	1,500	1,400	1,400	1,300	1,200	1,200
pH > 8.5	930	830	790	770	740	720	700	670	670

Table I-2E. Screening Levels for Aluminum, Total – 4 mg/L ≤ DOC < 6 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	250	340	390	430	470	510	560	620	640
6.6 ≤ pH < 6.7	280	370	410	450	480	520	580	630	650
6.7 ≤ pH < 6.8	310	390	440	470	500	540	590	640	660
6.8 ≤ pH < 6.9	340	420	470	490	530	570	610	660	680
6.9 ≤ pH < 7.0	380	460	500	520	560	590	640	670	690
7.0 ≤ pH < 7.2	450	520	550	570	600	640	670	710	720
7.2 ≤ pH < 7.4	560	610	640	650	680	710	730	760	760
7.4 ≤ pH < 7.6	710	740	750	760	770	790	810	820	820
7.6 ≤ pH < 7.8	900	900	900	890	890	890	900	900	900
7.8 ≤ pH < 8.0	1,100	1,100	1,100	1,100	1,000	1,000	1,000	990	990
8.0 ≤ pH < 8.5	1,600	1,600	1,500	1,500	1,400	1,400	1,300	1,200	1,200
pH > 8.5	930	830	790	770	740	720	700	670	670

Table I-2F. Screening Levels for Aluminum, Total – 6 mg/L ≤ DOC < 8 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	350	480	540	590	640	700	780	860	890
6.6 ≤ pH < 6.7	380	500	560	600	650	710	780	850	880
6.7 ≤ pH < 6.8	410	520	570	610	670	730	790	850	870
6.8 ≤ pH < 6.9	440	540	590	640	690	740	790	850	870
6.9 ≤ pH < 7.0	480	570	620	660	710	750	800	850	870
7.0 ≤ pH < 7.2	540	620	670	700	740	780	820	850	870
7.2 ≤ pH < 7.4	640	700	740	770	800	820	850	870	880
7.4 ≤ pH < 7.6	780	800	830	850	860	880	890	900	900
7.6 ≤ pH < 7.8	950	930	940	940	950	950	950	940	940
7.8 ≤ pH < 8.0	1,200	1,100	1,100	1,100	1,100	1,000	1,000	1,000	1,000
8.0 ≤ pH < 8.5	1,800	1,500	1,400	1,400	1,300	1,200	1,200	1,100	1,100
pH > 8.5	1,400	1,300	1,200	1,200	1,100	1,100	1,100	1,000	1,000

Table I-2G. Screening Levels for Aluminum, Total – 8 mg/L ≤ DOC < 10 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	400	530	610	660	720	790	880	960	1,000
6.6 ≤ pH < 6.7	420	550	620	670	730	800	870	950	980
6.7 ≤ pH < 6.8	450	570	630	680	740	800	870	940	970
6.8 ≤ pH < 6.9	480	590	650	700	760	810	870	930	950
6.9 ≤ pH < 7.0	520	620	680	720	770	820	870	920	940
7.0 ≤ pH < 7.2	580	660	720	760	800	830	870	910	930
7.2 ≤ pH < 7.4	670	740	780	810	840	860	890	910	930
7.4 ≤ pH < 7.6	800	840	860	880	890	910	920	930	940
7.6 ≤ pH < 7.8	960	950	960	970	970	960	960	960	950
7.8 ≤ pH < 8.0	1,200	1,100	1,100	1,100	1,100	1,000	1,000	1,000	990
8.0 ≤ pH < 8.5	1,700	1,500	1,400	1,300	1,300	1,200	1,200	1,100	1,100
pH > 8.5	1,600	1,500	1,400	1,400	1,300	1,300	1,200	1,200	1,200

Table I-2H. Screening Levels for Aluminum, Total – 10 mg/L ≤ DOC < 12 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	440	590	670	730	790	870	970	1,100	1,100
6.6 ≤ pH < 6.7	460	600	670	730	800	870	960	1,000	1,100
6.7 ≤ pH < 6.8	490	620	680	740	810	870	940	1,000	1,000
6.8 ≤ pH < 6.9	520	640	700	760	820	870	940	1,000	1,000
6.9 ≤ pH < 7.0	550	660	730	770	820	870	930	980	1,000
7.0 ≤ pH < 7.2	610	700	760	800	840	880	920	960	980
7.2 ≤ pH < 7.4	700	780	820	850	870	900	920	960	980
7.4 ≤ pH < 7.6	820	870	890	910	920	930	940	970	990
7.6 ≤ pH < 7.8	970	980	980	980	980	980	970	980	990
7.8 ≤ pH < 8.0	1,200	1,100	1,100	1,100	1,100	1,000	1,000	1,000	1,000
8.0 ≤ pH < 8.5	1,700	1,400	1,300	1,300	1,200	1,200	1,100	1,100	1,100
pH > 8.5	1,800	1,700	1,600	1,500	1,500	1,500	1,500	1,400	1,400

Table I-2l. Screening Levels for Aluminum, Total – DOC > 12 mg/L

pH	0 ≤ H < 25	25 ≤ H < 50	50 ≤ H < 75	75 ≤ H < 100	100 ≤ H < 150	150 ≤ H < 200	200 ≤ H < 300	300 ≤ H < 400	H > 400
6.5 ≤ pH < 6.6	450	610	700	760	830	910	1,000	1,100	1,100
6.6 ≤ pH < 6.7	480	620	700	760	830	910	990	1,100	1,100
6.7 ≤ pH < 6.8	510	640	710	770	840	900	980	1,100	1,100
6.8 ≤ pH < 6.9	540	660	730	780	840	900	970	1,000	1,100
6.9 ≤ pH < 7.0	570	680	750	800	850	900	960	1,000	1,000
7.0 ≤ pH < 7.2	620	720	780	820	860	900	940	980	1,000
7.2 ≤ pH < 7.4	710	790	840	860	890	910	940	990	1,000
7.4 ≤ pH < 7.6	830	880	900	920	930	940	950	990	1,000
7.6 ≤ pH < 7.8	980	980	990	990	980	980	980	1,000	1,000
7.8 ≤ pH < 8.0	1,200	1,100	1,100	1,100	1,100	1,000	1,000	1,000	1,000
8.0 ≤ pH < 8.5	1,700	1,400	1,300	1,300	1,200	1,200	1,100	1,100	1,100
pH > 8.5	1,900	1,700	1,700	1,600	1,600	1,600	1,500	1,500	1,400

B. **Screening Levels for Priority Pollutants.** Dischargers required to sample and analyze the effluent for the constituents contained in Table I-3 shall compare the corresponding applicable screening levels (MUN or non-MUN) and submit the results as part of the application (Notice of Intent, see Attachment J). Any exceedance of a screening level in Table I-3 may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer. The screening level in Table I-3 is not applicable for discharges from water supply systems eligible for a categorical exception for meeting the priority pollutant screening level as authorized by section 5.3 of the SIP.

Table I-3. Screening Levels for Priority Pollutants

CTR #	Parameter	Units	Screening Level (Based on MUN)	Screening Level (Based on No MUN)
1	Antimony, Total	µg/L	6	4300
2	Arsenic, Total	µg/L	10	150
3	Beryllium, Total	µg/L	4	--
4	Cadmium, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
5a	Chromium (III)[3]	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
5b	Chromium (VI)[3]	µg/L	10	11
6	Copper, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
7	Lead, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
8	Mercury, Total	µg/L	0.05	0.051
9	Nickel, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
10	Selenium, Total	µg/L	5.0	5.0
11	Silver, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
12	Thallium, Total	µg/L	1.7	6.3
13	Zinc, Total	µg/L	See Table I-4A through I-4B	See Table I-4A through I-4B
14	Cyanide, Total (as CN)	µg/L	5.2	5.2
15	Asbestos	MFL	7	--
16	2,3,7,8-TCDD (Dioxin)	µg/L	1.30E-08	1.40E-08
17	Acrolein	µg/L	320	780
18	Acrylonitrile	µg/L	0.059	0.66
19	Benzene	µg/L	1	71
20	Bromoform	µg/L	4.3	360
21	Carbon Tetrachloride	µg/L	0.25	4.4
22	Chlorobenzene	µg/L	70	21,000
23	Chlorodibromomethane	µg/L	0.41	34
24	Chloroethane	µg/L	--	--

CTR #	Parameter	Units	Screening Level (Based on MUN)	Screening Level (Based on No MUN)
25	2-Chloroethylvinyl Ether	µg/L	--	--
26	Chloroform	µg/L	60	2000
27	Dichlorobromomethane	µg/L	0.56	46
28	1,1-Dichloroethane	µg/L	5	--
29	1,2-Dichloroethane	µg/L	0.38	99
30	1,1-Dichloroethylene	µg/L	0.057	3.2
31	1,2-Dichloropropane	µg/L	0.52	39
32	1,3-Dichloropropylene	µg/L	0.5	1,700
33	Ethylbenzene	µg/L	300	29,000
34	Methyl Bromide	µg/L	48	4,000
35	Methyl Chloride	µg/L	--	--
36	Methylene Chloride	µg/L	4.7	1,600
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	11
38	Tetrachloroethylene	µg/L	0.8	8.85
39	Toluene	µg/L	150	200,000
40	1,2-Trans-Dichloroethylene	µg/L	10	140,000
41	1,1,1-Trichloroethane	µg/L	200	--
42	1,1,2-Trichloroethane	µg/L	0.60	42
43	Trichloroethylene	µg/L	2.7	81
44	Vinyl Chloride	µg/L	0.5	525
45	2-Chlorophenol	µg/L	120	400
46	2,4-Dichlorophenol	µg/L	93	790
47	2,4-Dimethylphenol	µg/L	540	2,300
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	765
49	2,4-Dinitrophenol	µg/L	70	14,000
50	2-Nitrophenol	µg/L	--	--
51	4-Nitrophenol	µg/L	--	--
52	3-Methyl-4-Chlorophenol	µg/L	--	--
53	Pentachlorophenol	µg/L	0.28	8.2
54	Phenol	µg/L	21,000	4,600,000
55	2,4,6-Trichlorophenol	µg/L	2.1	6.5
56	Acenaphthene	µg/L	1,200	2,700
57	Acenaphthylene	µg/L	--	--
58	Anthracene	µg/L	9,600	110,000
59	Benzidine	µg/L	0.00012	0.00054
60	Benzo(a)Anthracene	µg/L	0.0044	0.049
61	Benzo(a)Pyrene	µg/L	0.0044	0.049
62	Benzo(b)Fluoranthene	µg/L	0.0044	0.049
63	Benzo(ghi)Perylene	µg/L	--	--
64	Benzo(k)Fluoranthene	µg/L	0.0044	0.049
65	Bis(2-Chloroethoxy)Methane	µg/L	--	--
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	1.4

CTR #	Parameter	Units	Screening Level (Based on MUN)	Screening Level (Based on No MUN)
67	Bis(2-Chloroisopropyl)Ether	µg/L	1,400	170,000
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	5.9
69	4-Bromophenyl Phenyl Ether	µg/L	--	--
70	Butylbenzyl Phthalate	µg/L	3,000	5,200
71	2-Chloronaphthalene	µg/L	1,700	4,300
72	4-Chlorophenyl Phenyl Ether	µg/L	--	--
73	Chrysene	µg/L	0.0044	0.049
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	0.049
75	1,2-Dichlorobenzene	µg/L	600	17,000
76	1,3-Dichlorobenzene	µg/L	400	2,600
77	1,4-Dichlorobenzene	µg/L	5	2,600
78	3,3-Dichlorobenzidine	µg/L	0.04	0.077
79	Diethyl Phthalate	µg/L	23,000	120,000
80	Dimethyl Phthalate	µg/L	313,000	2,900,000
81	Di-n-Butyl Phthalate	µg/L	2,700	12,000
82	2,4-Dinitrotoluene	µg/L	0.11	9.1
83	2,6-Dinitrotoluene	µg/L	--	--
84	Di-n-Octyl Phthalate	µg/L	--	--
85	1,2-Diphenylhydrazine	µg/L	0.040	0.54
86	Fluoranthene	µg/L	300	370
87	Fluorene	µg/L	1,300	14,000
88	Hexachlorobenzene	µg/L	0.00075	0.00077
89	Hexachlorobutadiene	µg/L	0.44	50
90	Hexachlorocyclopentadiene	µg/L	50	17,000
91	Hexachloroethane	µg/L	1.9	8.9
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	0.049
93	Isophorone	µg/L	8.4	600
94	Naphthalene	µg/L	--	--
95	Nitrobenzene	µg/L	17	1,900
96	N-Nitrosodimethylamine	µg/L	0.00069	8.1
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	1.4
98	N-Nitrosodiphenylamine	µg/L	5.0	16
99	Phenanthrene	µg/L	--	--
100	Pyrene	µg/L	960	11,000
101	1,2,4-Trichlorobenzene	µg/L	5	--
102	Aldrin	µg/L	0.00013	0.00014
103	alpha-BHC	µg/L	0.0039	0.013
104	beta-BHC	µg/L	0.014	0.046
105	gamma-BHC (Lindane)	µg/L	0.019	0.063
106	delta-BHC	µg/L	--	--
107	Chlordane	µg/L	0.00057	0.00059
108	4,4-DDT	µg/L	0.00059	0.00059

CTR #	Parameter	Units	Screening Level (Based on MUN)	Screening Level (Based on No MUN)
109	4,4-DDE	µg/L	0.00059	0.00059
110	4,4-DDD	µg/L	0.00083	0.00084
111	Dieldrin	µg/L	0.00014	0.00014
112	alpha-Endosulfan	µg/L	0.056	0.56
113	beta-Endosulfan	µg/L	0.056	0.56
114	Endosulfan Sulfate	µg/L	110	240
115	Endrin	µg/L	0.036	0.036
116	Endrin Aldehyde	µg/L	0.76	0.81
117	Heptachlor	µg/L	0.00021	0.00021
118	Heptchlor Epoxide	µg/L	0.00010	0.00011
119-125	PCBs sum[5]	µg/L	0.00017	0.00017
126	Toxaphene	µg/L	0.0002	0.0002

Table I-3 Notes:

1. **Parameters** shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).
2. **Hardness-Dependent Metals (Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc).** For hardness-dependent metal screening levels, see Tables H-5A through H-5B below.
3. **Chromium (III) and Chromium (IV).** Total Chromium may be sampled as a substitute for Chromium (III) and Chromium (VI) for the purpose of comparing with the specified screening level.
4. **Mercury, Total.** For the protection of commercial and sport fishing (COMM), tribal tradition and culture (CUL), wildlife habitat (WILD), and marine habitat (MAR) beneficial uses, the screening level of 12 ng/L of total mercury for flowing water bodies (e.g., rivers, creeks, streams, and waters with tidal mixing) or 4 ng/L of total mercury for slow-moving water bodies (e.g, lagoons, closed estuaries, and marshes) shall apply.
5. **Polychlorinated Biphenyls Sum (PCBs Sum).** The screening level for the PCBs sum applies to the sum of PCB Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

C. Screening Level for Hardness-Dependent Metals. Dischargers required to sample and analyze the effluent for the constituents contained in Table I-4A and I-4B shall compare the corresponding applicable screening level and submit the results as part of the application (Notice of Intent, see Attachment J). The screening level contained in Tables I-4A and I-4B are based on hardness. For waters with hardness concentrations between 0 mg/L and 10 mg/L, screening levels have been segmented into 5 mg/L increments. For each segment the midpoint between the lower and upper bounds was used to determine the corresponding screening level. For waters with hardness concentrations greater than or equal to 10 mg/L but less than 100 mg/L, screening levels have been segmented into 10 mg/L increments. For each segment the midpoint between the lower and upper bounds was used to determine the corresponding screening level. For waters with hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, screening levels shall be based on a hardness value of 150 mg/L. For waters with lowest observed hardness concentrations greater than or equal to 200 mg/L, screening levels shall be based on a hardness value of 200 mg/L. Any exceedance of the screening levels in Tables I-4A or I-4B may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer.

Table I-4A. Screening Levels for Hardness-Dependent Metals – Hardness (H) 0 mg/L to <60 mg/L

Parameter	Units	H < 5	5 ≤ H < 10	10 ≤ H < 20	20 ≤ H <30	30≤ H < 40	40 ≤ H < 50	50 ≤ H < 60
Cadmium, Total	µg/L	0.070	0.24	0.56	0.83	1.1	1.3	1.5
Chromium (III)	µg/L	10	25	44	67	88	110	130
Copper, Total	µg/L	0.40	1.0	1.8	2.9	3.8	4.7	5.6
Lead, Total	µg/L	0.029	0.12	0.28	0.54	0.84	1.2	1.5
Nickel, Total	µg/L	2.3	5.8	10	16	21	27	31
Silver, Total	µg/L	0.0071	0.047	0.16	0.37	0.67	1.0	1.5
Zinc, Total	µg/L	5.3	13	24	37	49	61	72

Table I-4B. Screening Levels for Hardness-Dependent Metals – Hardness (H) ≥60 mg/L

Parameter	Units	60≤ H <70	70≤ H <80	80≤ H <90	90≤ H <100	100≤ H <200	H ≥200
Cadmium, Total	µg/L	1.8	2.0	2.2	2.4	3.4	4.2
Chromium (III)	µg/L	150	160	180	200	290	370
Copper, Total	µg/L	6.5	7.3	8.1	8.9	13	17
Lead, Total	µg/L	1.8	2.2	2.6	3.0	5.3	7.7
Nickel, Total	µg/L	36	41	45	50	74	94
Silver, Total	µg/L	1.9	2.5	3.1	3.7	8.2	13
Zinc, Total	µg/L	83	94	100	120	170	220

Table I-4A and Table I-4B Notes:

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

D. Screening Levels for VOC Remediation Projects. All dischargers seeking authorization to discharge wastewater from VOC remediation projects under this General Order shall sample and analyze the wastewater for the constituents contained in Table I-5. The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the application (Notice of Intent, see Attachment J). VOC remediation projects are required to meet the technology-based screening levels in Table I-5. Any exceedance of screening levels in Table I-5 may result in additional treatment if the Discharger cannot demonstrate the current treatment system is capable of meeting the screening level. Table I-5 contains a partial list of VOCs and is not intended to limit the Executive Officer from identifying additional VOCs for inclusion under this General Order and as specified in the NOA.

Table I-5. Screening Levels for VOC Remediation Projects

Parameter	Units	Screening Level
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Methylene Chloride	µg/L	0.5

Parameter	Units	Screening Level
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.05
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Perchlorate	µg/L	4.0
Stoddard Solvent	µg/L	0.5
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

Table I-5 Notes:

1. **1,2 Dichloroethane, Carbon Tetrachloride, Chlorodibromomethane.** More stringent water quality-based screening levels may be applicable in Table I-3.
2. **Ethylene dibromide (EDB).** For non-MUN designated water bodies, the screening level is 0.5 µg/L.

E. Screening Levels for Groundwater Petroleum Fuel Pollution Cleanup Projects. All dischargers seeking authorization to discharge wastewater from Groundwater Petroleum Fuel Pollution Cleanup projects under this General Order shall sample and analyze the wastewater for the constituents contained in Table I-6. The results of the analyses shall be compared to the corresponding applicable screening level and shall be submitted as part of the application (Notice of Intent, see Attachment J). Groundwater Petroleum Fuel Pollution Cleanup projects are required to meet the screening level in Table I-6. Any exceedance of a screening level in Table I-6 may result in additional treatment if the Discharger cannot demonstrate the current treatment system is capable of meeting the screening level.

Table I-6. Screening Levels for Groundwater Petroleum Fuel Pollution Cleanup Projects

Parameter	Units	Screening Levels
Benzene	µg/L	0.5
Ethylbenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
Naphthalene	µg/L	5.0
Toluene	µg/L	0.5
Di-isopropyl Ether	µg/L	5
Ethylene Dibromide	µg/L	0.05
Ethyl Tertiary Butyl Ether	µg/L	5
Methanol	µg/L	20
Methyl Tertiary Butyl Ether	µg/L	1.0
Carcinogenic Polycyclic Aromatic Hydrocarbons	µg/L	0.0044
Tertiary Amyl Methyl Ether	µg/L	1.0
Tertiary Butyl Alcohol	µg/L	10
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	50
Xylene[2]	µg/L	0.5

Table I-6 Notes:

1. **Ethylbenzene, 1,2-Dichloroethane.** More stringent water quality-based screening levels may be applicable in Table I-3.
2. **Ethylene Dibromide.** For non-MUN designated water bodies, the screening level is 0.5 µg/L.
3. **Carcinogenic Polycyclic Aromatic Hydrocarbons.** Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluroanthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.
4. **Xylene.** Applies to the sum of o-xylene, m-xylene, and p-xylene.

III. Screening Levels for Discharges to Specific Waterbodies

A. Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City.

In addition to the analyses required in Table I-1, dischargers seeking authorization to discharge under this General Order to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City shall sample and analyze the effluent for the constituents contained in Tables I-7A and I-7B. The screening levels contained in Tables I-7A and I-7B for copper, zinc, and cadmium supersede those contained in Table I-4A and I-4B for the

same parameters. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C). The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the application. The screening levels contained in Tables I-7A and I-7B are based on hardness. For waters with hardness concentrations between 0 mg/L and 10 mg/L, screening levels have been segmented into 5 mg/L increments. For each segment the midpoint between the lower and upper bounds was used to determine the corresponding screening level. For waters with hardness concentrations greater than or equal to 10 mg/L but less than 100 mg/L, screening levels have been segmented into 10 mg/L increments. For each segment the midpoint between the lower and upper bounds was used to determine the corresponding screening level. For waters with hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, screening levels shall be based on a hardness value of 150 mg/L. For waters with lowest observed hardness concentrations greater than or equal to 200 mg/L, screening levels shall be based on a hardness value of 200 mg/L.

Table I-7A. Screening Levels for Hardness-Dependent Metals – Hardness (H) 0 mg/L to <60 mg/L

Parameter	Units	H < 5	5 ≤ H < 10	10 ≤ H < 20	20 ≤ H <30	30≤ H < 40	40 ≤ H < 50	50 ≤ H < 60
Cadmium, Total	µg/L	0.0090	0.032	0.072	0.13	0.19	0.26	0.32
Copper, Total	µg/L	0.43	1.2	2.3	3.8	5.2	6.6	8.0
Zinc, Total	µg/L	1.6	4.0	7.2	11	15	18	21

Table I-7B. Screening Levels for Hardness-Dependent Metals – Hardness (H) ≥60 mg/L

Parameter	Units	60≤ H <70	70≤ H <80	80≤ H <90	90≤ H <100	100≤ H <200	H ≥200
Cadmium, Total	µg/L	0.39	0.46	0.54	0.61	1.0	1.4
Copper, Total	µg/L	9.3	11	12	13	21	27
Zinc, Total	µg/L	24	27	30	33	49	62

B. Screening Levels for Discharges Within the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin. In addition to the analyses required in Table I-1, dischargers seeking authorization to discharge under this General Order within the Sacramento and San Joaquin River Basins and waters designated COLD in the Tulare Lake Basin shall sample and analyze the effluent for the constituents contained in Table I-8. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C). The screening levels contained in Table I-8 for persistent chlorinated hydrocarbon pesticides supersedes those contained in Table I-3 for the same parameters. The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the application.

The non-detectable (ND) screening levels applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use U.S. EPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L. Persistent chlorinated hydrocarbon pesticides include aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

Table I-8. Screening Levels for Discharges Within the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin

Parameter	Units	Screening Levels
Persistent Chlorinate Hydrocarbon Pesticides	µg/L	ND

ATTACHMENT J – NOTICE OF INTENT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF
GENERAL ORDER R5-2022-0006-03
NPDES CAG995002
FOR
LIMITED THREAT DISCHARGES TO SURFACE WATERS

To obtain coverage under this General Order, which also serves as the National Pollutant Discharge Elimination System (NPDES) Permit, the Discharger must submit a complete Notice of Intent including the following requirements. Additional information may be requested by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for a specific project.

1. Form

To be submitted by all Dischargers.

☐ State Water Board Form 200 – Report of Waste Discharge Form

2. Project Description

To be submitted by all Dischargers

☐ A full description on official letterhead, of the proposed project, treatment processes (if applicable), and discharge. Include the following:

- ☐ Discharge Type/Description;
- ☐ Discharge location (County, City, street, nearest cross street, Township/Range/Section, GPS coordinates);
- ☐ Maximum daily discharge in gallons per day (GPD);
- ☐ Average daily discharge in GPD;
- ☐ Total volume of discharge
- ☐ Approximate start-up date;
- ☐ Projected discharge duration;
- ☐ If discharge flows are intermittent, the discharge frequency and volume per

discharge;

☐ Name of receiving water body;

☐ Name of major downstream water body;

☐ A narrative description of any additives and their composition;

☐ A narrative description of the proposed or existing treatment system or reasons why a treatment system is not necessary;

☐ If a professional engineer has evaluated the existing or proposed discharge for compliance with this General Order, identify; name, mailing address, phone number, certificate number, date.

☐ A site map showing the location of the proposed project, treatment system (if applicable), discharge points, the receiving water, groundwater wells and residences within 1,500 feet.

3. Fee Requirement

To be submitted by all new Dischargers.

Provide the applicable fee. Information concerning the applicable fee can be found at the State Water Boards' Fees home page (http://www.waterboards.ca.gov/resources/fees/). Checks must be made payable to the State Water Resources Control Board. For existing dischargers, the annual permitting fee satisfies this fee requirement when requesting continued coverage under this General Order.

4. Discharge Type

To be submitted by all Dischargers. Check all that apply.

☐ Well Development Water	☐ Construction Dewatering
☐ Pump/Well Testing	☐ Water Supply System
☐ Pipeline/Tank Pressure Testing	☐ Filter Backwash
☐ Pipeline/Tank Flushing or Dewatering	☐ Condensate
☐ Aggregate Mine	☐ Superchlorination
☐ Groundwater Extraction and/or Cleanup Project	☐ Equipment Decontamination
☐ Liquid Mine Waste	☐ Wastewater from Cleanup Site
☐ Ambient Streamflow Augmentation	☐ Alum application
☐ Other/Describe	

5. Evaluation of Disposal/Reclamation Options

To be submitted by new Dischargers.

Provide an evaluation of disposal/reclamation options and justification for selecting a surface water disposal alternative. If no alternative disposal options are viable, explain why (attach additional sheets as necessary). If alternative disposal options are feasible, contact the Central Valley Water Board. If the answer to any of the following questions is "Yes", then surface water disposal is not an option. **This order does not apply if there is no discharge to surface waters.**
Is discharge to the local municipal wastewater treatment plant a viable option? ☐ Yes ☐ No If no, provide proof that discharge to the local municipal wastewater treatment plant is not viable or explain why it is infeasible to connect to the wastewater treatment plant. The Discharger may submit any denial or restrictive flow letter from the wastewater treatment plant as proof that this is not a viable option.
Is land disposal a viable option? ☐ Yes ☐ No If no, provide an explanation why ponds, infiltration basins, spray disposal areas, and/or subsurface infiltration are not viable options.
Is underground injection a viable option? ☐ Yes ☐ No If no, provide an explanation.
Is this discharge eligible for coverage under another statewide general order (e.g., State Water Resources Control Board Order WQ 2014-0194-DWQ for drinking water system discharges)? ☐ Yes ☐ No

6. Wastewater Sampling and Analysis Requirements

To be submitted by all Dischargers.

☐ Provide the results of analysis of the wastewater for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged.

☐ Provide the analytical data from the laboratory.

☐ Provide a summary of the analysis after comparison of the analytical results to the screening levels in Attachment I.

7. Evaluation of Salt Control Program Applicability

To be submitted by all Dischargers. Based on the information provided, the Discharger may already consistently comply with the Salt Control Program or be eligible for the Conservative or Alternative Salinity Permitting Approach of the Salt Control Program.

☐ Provide the Salt Control Program Notice of Intent (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/forms_temps_guide/salt_noi_form.pdf). Salt Control Program Notice of Intent Guidance (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/forms_temps_guide/) can be found on the Central Valley Water Board's website.

If a discharge is does not consistently comply with the Salt Control Program or is not eligible for the Conservative Salinity Permitting Approach, Dischargers will be required to enroll under the Alternative Salinity Permitting Approach and pay the applicable fees to participate in the Prioritization and Optimization study (https://www.cvsalinity.org/participate-in-the-p-o-study-for-salt-compliance.html).

8. Additional Requirements for Discharges to Impaired Water Bodies

To be submitted if proposed discharge is to impaired water bodies pursuant to CWA section 303(d).

☐ Provide the results of analysis of the wastewater for pollutants causing impairment under the current CWA 303(d) List, if proposing to discharge to an impaired surface water. The list of impaired surface waters can be found under the CWA section 303(d) List on the Impaired Waters List Page (http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/).

9. Additional Requirements for Discharges from Drinking Water Supply Systems

To be submitted for drinking water supply system discharges only, for application for Categorical Exception to Priority Pollutant monitoring requirements.

If the discharge is necessary to implement control measures regarding drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code, then the Discharger shall submit the following for the approval of the Executive Officer of the Central Valley Water Board:

☐ A detailed description of the proposed action, including the proposed method of completing the action.

☐ A time schedule.

☐ A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality control procedures).

☐ CEQA documentation.

☐ Contingency plans.

☐ Identification of alternate water supply (if needed).

☐ Residual waste disposal plans.

Water suppliers with more than one discharge point shall submit:

☐ A Pollution Prevention and Monitoring and Reporting Program Plan which contains all of the elements in Attachment F.

10. Additional Requirements for Application for Intake Water Credits.

To be submitted by dischargers seeking Intake Water Credits and where treatment is required to reduce pollutants to levels that will comply with effluent limitations prior to discharging to surface waters and the primary source of water for the Discharger is the same as the water body that receives the effluent discharge.

☐ Provide a written request for an intake water credit on a pollutant-by-pollutant basis;

☐ Provide a completed Attachment G;

☐ Provide the analytical results of sampling of the intake water for the pollutants for which intake water credits are requested.

11. Additional Requirements for Wastewater Requiring Treatment Prior to Discharge

To be submitted by Dischargers where treatment is required to reduce pollutants to levels that will comply with effluent limitations prior to discharging to surface waters.

☐ A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations.

☐ Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.

☐ Analytical results of sampling of the treated effluent for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged.

12. Additional Requirements for Dischargers applying alum for phosphorous sequestration

An Alum Application Plan (AAP) as described in Attachment K must be submitted with the NOI package. The AAP may be used to fulfill the requirements of the above Section 2 Project Description.

13. Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment."

A. Printed Name: _____

B. Signature: _____ C. Date: _____

D. Title: _____

ATTACHMENT K – ALUM APPLICATION PLAN (APP)

The Alum Application Plan (AAP) is required for dischargers who are applying alum to reduce phosphorous in receiving waters. For the purposes of this permit, the term “alum” will be used to describe the class of chemicals used to sequester phosphorous that have aluminum as their active ingredient (such as aluminum sulfate and sodium aluminate). The AAP shall be submitted with the Notice of Intent documents.

The AAP shall contain, but not be limited to, the following elements, to address each proposed treatment area:

1. **Project Summary:**

   Provide an overall summary of the proposed project, including the approximate startup date and duration.

2. **Problem Statement:**

   Identify the need for the use of alum

3. **Receiving Water(s):**

   Identify the receiving water(s) impacted by the alum application (e.g. lake, creek, or river). Provide a description of the treatment area within in the receiving water(s). If applicable, list the gates or control structures to be used to control the extent of receiving waters potentially affected by the alum application and provide an inspection schedule of those gates or control structures to ensure they are operational. Include a site map showing the location of the proposed treatment area and monitoring points.

4. **Description of Alum Performance**

   Describe the potential water quality benefits of alum application.

5. **Water Body Impacts:**

   Identify potential effects on the waterbody and water quality parameters (e.g., pH), such as the need for buffering.

6. **Aquatic Organism Impacts:**

   Identify potential effects on aquatic organisms

7. **Project Objectives and Hypothesized Results:**

   Describe the objectives and the expected results of the alum treatment.

8. Techniques and Equipment:

Provide a description of the application techniques, equipment, and procedural steps that will be used for application of the alum. Include a description of the Best Management Practices (BMPs) to be implemented. The BMPs shall include, at a minimum:

1. Measures that prevent alum spills and for alum spill containment during the event of a spill;
2. Measures to ensure that only an appropriate rate of application is applied and the treatment is relatively uniform and mixed;
3. Measures to cease alum application or controls to be implemented if the pH drops below 6.5.
4. Measures to cease alum application when wind speed is greater than 15 miles per hour.
5. The Discharger's plan in educating its staff and alum applicators on how to avoid any potential adverse effects of alum application; and
6. Discussion on planning and coordination with farmers and agencies with water rights diversions so that beneficial uses of the water are not impacted during the treatment period
7. Measures for storing or disposing of any unused alum or buffering agents.

9. Calculations:

Provide calculations showing how the Discharger will determine the actual amount of alum that will be applied during treatment. These calculations must also include any assumptions that may be used, the reasons why those assumptions were made, and the source of the data used to make the assumptions.

10. Monitoring Plan:

Provide the details of monitoring that will occur prior to, during, and after, treatment with the alum. The sampling and analysis program must be developed and implemented in accordance with the General Monitoring Provisions, Receiving Water Monitoring and Reporting Requirements contained in sections I, VII and X, respectively, of the Monitoring and Reporting Program (Attachment C). At a minimum, the monitoring must include the following:

A. Baseline Monitoring – As described in Attachment I, Table I-1, the discharger must take water samples to establish baseline conditions in the receiving water(s) for the following parameters:
   i. pH
   ii. Electrical Conductivity
   iii. Dissolved organic carbon (DOC)
   iv. Total hardness (CaCO3)
   v. Aluminum, Total
   vi. Aluminum, Dissolved

vii. Total Phosphorus

B. Application Monitoring
   i. Surface water pH and electrical conductivity samples will be taken just prior to application of alum. Continuous monitoring of pH at 15 minute intervals shall be conducted during the application of the alum.
   ii. Electrical conductivity, total recoverable aluminum and dissolved aluminum samples shall be collected immediately after the alum application.
   iii. Visual observations shall be recorded before, during and immediately after the alum application.
C. Post-application Monitoring – two weeks after treatment and monthly thereafter for 3 months, the Discharger shall sample for:
   i. pH
   ii. Electrical Conductivity
   iii. Dissolved organic carbon (DOC)
   iv. Total hardness (CaCO3)
   v. Total recoverable aluminum
   vi. Total Phosphorus
   vii. Visual observations
D. Representative Monitoring Location(s) - The monitoring location(s) shall be representative of the waterbody-wide conditions, with at least one shoreline and one open water location. Describe the rationale for the selection of representative monitoring locations. The latitude and longitude coordinates for each monitoring location must be recorded. Samples must be taken from the same location(s) prior to, during and after the alum application.

11. Proposed Schedule

A schedule for proposed treatment(s), monitoring, and reporting. Timing should address aquatic plant biomass that may interfere with inactivation of sediment phosphorus (i.e., early spring or fall treatment may be the most optimal timeframe).

12. Reporting

Reporting for alum application must include:

A. Date and Location of application
B. Name of applicator(s)
C. Type and amount of product used
D. Total area treated
E. Application details, such as flow, and level of water body, time application started and stopped, and application rate and concentration.
F. Results of any water quality parameter monitoring required as part of the alum application
G. Laboratory analysis records, which must include analysis method and units of measure.
H. Any observed, or measured, impacts or stress to aquatic organisms or wildlife.

I. Description of whether the project objectives were achieved.
J. Certification that the applicator(s) followed the AAP

13. Bibliography

A bibliography containing citations to the references of currently available scientific journal articles or other sources of information used in developing the plan for alum application.