

## North Coast Regional Water Quality Control Board

**ORDER NO. R1-2020-0006  
GENERAL NPDES NO. CAG024902  
WASTE DISCHARGE REQUIREMENTS  
FOR  
LOW THREAT DISCHARGES  
TO SURFACE WATERS IN THE NORTH COAST REGION**

The following Permittees are subject to waste discharge requirements (WDRs) set forth in this General Order upon authorization by a Notice of Applicability (NOA) from the California Regional Water Quality Control Board, North Coast Region (Regional Water Board):

**Table 1. Permittee Information**

<b>Permittees</b>	This General Order applies to discharges from individuals, public agencies, private businesses, and other legal entities (hereafter Permittees) of clean or relatively pollutant-free wastewaters that pose little or no threat to the quality of waters of the United States.
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**Table 2. Discharge Description**

Discharge Location	Receiving Water
Discharge locations will be authorized when each Permittee enrolls under this General Order. Eligible discharges are identified in section I.B. of this Order.	Surface Waters within the North Coast Region, including inland waters, ocean waters, enclosed bays and estuaries

**Table 3. Administrative Information**

This General Order was adopted on:	<b>April 16, 2020</b>
This General Order shall become effective on:	<b>June 21, 2020</b>
This General Order shall expire on:	<b>June 20, 2025</b>
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region have classified these discharges as follows:	<b>Minor</b>

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) Order No. R1-2015-0003 and Monitoring and Reporting Program (MRP) No. R1-2015-0003, are rescinded upon the effective date of this General Order except for enforcement purposes, and in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements of this General Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous permit.

VALERIE L. QUINTO, CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

Order No. R1-2020-0006  
Low Threat Discharges to Surface Waters in the North Coast Region  
NPDES No. CAG024902

I, Matthias St. John, Executive Officer, do hereby certify that this General Order with all attachments is a full, true, and correct copy of the General Order adopted by the California Regional Water Quality Control Board, North Coast Region, on **April 16, 2020**

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Matthias St. John, Executive Officer

20\_0006\_Low Threat Discharges to Surface Waters

**Contents**

I. Purpose of Order and Eligibility Information..... 4  
 II. Notification Requirements ..... 8  
 III. Findings .....11  
 IV. Discharge Prohibitions.....12  
 V. Effluent Limitations and Discharge Specifications .....13  
     A. Effluent Limitations .....13  
     B. Other Discharge Specifications .....14  
     C. Land Discharge Specifications.....15  
     D. Water Recycling Specifications .....15  
 VI. Receiving Water Limitations .....15  
     A. Surface Water Limitations – Inland Waters, Enclosed Bays, and Estuaries .....15  
     B. Surface Water Limitations – Ocean Waters .....18  
     C. Groundwater Limitations .....20  
 VII. Provisions .....21  
     A. Standard Provisions .....21  
     B. Monitoring and Reporting Program (MRP) Requirements.....22  
     C. Special Provisions.....22  
 VIII. Compliance Determination .....26

**Tables**

Table 1. Permittee Information ..... 1  
 Table 2. Discharge Description ..... 1  
 Table 3. Administrative Information..... 1  
 Table 4. Effluent Limitations for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries .....13  
 Table 5. Effluent Limitations for Discharges to Ocean Waters .....14

**Attachments**

Attachment A – Definitions .....A-1  
 Attachment B – Notice of Intent .....B-1  
 Attachment B-1 – Best Management Practices/Pollution Prevention Plan ..... B-11  
 Attachment C – Water Quality Objectives for North Coast Region ..... C-1  
 Attachment D – Standard Provisions .....D-1  
 Attachment E – Monitoring and Reporting Program..... E-1  
 Attachment F – Fact Sheet ..... F-1  
 Attachment G – Notice of Termination.....G-1

## I. PURPOSE OF ORDER AND ELIGIBILITY INFORMATION

### A. Purpose of Order and Definition of Low Threat Discharge

The purpose of this General Order is to regulate low threat discharges from a discrete point source to surface waters of the North Coast Region. The *Water Quality Control Plan for the North Coast Region* (Basin Plan) includes an Action Plan for Low Threat Discharges that defines these discharges and identifies procedures for regulating low threat discharges to surface waters in the North Coast Region. According to the Basin Plan, a low threat discharge is generally defined as a planned, short-term and/or minimized volume discharge from a definable project that results in a point source discharge to surface waters and that is managed in a manner that does not threaten the quality or beneficial uses of water without additional dilution. These discharges meet the definition of a waste, and as such, are required to be permitted pursuant to the California Water Code. Low threat discharges can cause, or threaten to cause adverse effects of existing or potential beneficial uses of the receiving water if they are not properly managed through best management practices (BMPs) that remove pollutants and minimize the volume, rate, and duration of discharge. Management of the discharge may include a minimal level of treatment for removal of pollutants such as sediment or chlorine, or to increase dissolved oxygen, or decrease temperature.

Low threat point source discharges may be permitted to surface waters and may be exempted from the Basin Plan seasonal and year-round point source discharge prohibitions and the discharge flow limitation, provided that the following conditions are met:

1. The discharge shall not adversely affect the beneficial uses of the receiving water or cause a condition of nuisance.

This condition requires that the discharge shall not cause or substantially contribute to adverse impacts on the receiving water, including, but not limited to, erosion, adverse impacts on aquatic life, or creation of undesirable conditions (e.g., algae, vectors, localized flooding, etc.).

2. The discharge shall comply with all applicable water quality objectives.

This condition requires that the discharge will not contain pollutants at levels that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable regional, state, or federal water quality criterion, such as those established by the U.S. EPA pursuant to CWA section 303 or the state pursuant to title 22 of the California Code of Regulations (CCR), Division 4, Chapter 15 or the Regional Water Board in the Basin Plan. This condition also requires that the discharge not have acute or chronic toxicity.

3. Best practicable treatment or control (BPTC) of the discharge shall be implemented to assure that pollution and nuisance will not occur, and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

This condition requires implementation of the best treatment and control practices feasible, with due consideration to cost and protection of water quality.

4. The discharge is necessary because no feasible alternative to the discharge (reclamation, evaporation, infiltration, discharge to sanitary sewer, etc.) is available.

This condition requires that the Permittee evaluate if there are alternatives to a discharge to surface waters, and document that evaluation.

5. The discharge is limited to that increment of wastewater that remains after implementation of all reasonable alternatives for reclamation or disposal.

This condition provides for the use of multiple alternatives to minimize the discharge due to the Permittee's activity and promotes putting the discharge to a beneficial use, whenever possible.

6. The discharge is regulated by National Pollutant Discharge Elimination System (NPDES) Permit/Waste Discharge Requirements (WDRs).

This General Order provides a mechanism to provide NPDES coverage for low threat discharges to surface waters.

This General Order provides one of several possible permitting mechanisms for low threat discharges that meet conditions 1 through 5. Proposed low-threat discharges to storm drains that are regulated under a municipal separate storm sewer system (MS4) permit may be governed by the MS4 permit provided that the MS4 permittee has developed a programmatic or project-specific BMP plan that applies to non-storm water discharges and the BMP plan has been approved by the Regional Water Board (Phase 1 MS4 permittees) or the Executive Officer (Phase 2 MS4 permittees). On a case-by-case basis, it may be determined that proposed discharges to a permitted MS4 storm drain system may be more effectively regulated through enrollment under this General Order. In such cases, the Permittee would be required to submit an Notice of Intent (NOI) for coverage under this General Order.

This General Order does not apply if there is no discharge to surface waters. If any alternative to discharge to surface water is feasible, contact the Regional Water Board, to determine if any other regulatory requirements apply for the selected alternative.

## **B. Authorized Discharges**

1. **Eligible Discharges.** Low threat discharges that may be authorized by this General Order are relatively pollutant-free discharges that pose little threat to water quality when treated with simple, low technology treatments and/or controlled with BMPs to eliminate or reduce pollutants and minimize volume, rate, and duration of the discharge. Some discharges may require treatment, such as settling out sediment or dechlorination to remove chlorine prior to discharge and/or BMPs to assure that the discharge does not create conditions of pollution or nuisance. Discharges to surface waters of the North Coast Region that meet the definition of "low threat," above, are eligible for coverage under the General Order and may include, but are not limited to, the following categories of discharges:

- a. Construction dewatering of groundwater, captured storm water, or any non-storm water where sediment and naturally occurring parameters (e.g., naturally occurring metals or salts, temperature, pH, etc.) are the only pollutants of concern and these pollutants are in compliance with applicable water quality objectives;
- b. Discharges resulting from maintenance, disinfection, cleaning, or flushing of water supply wells, pipelines, tanks, and reservoirs where chlorine, chlorine byproducts, and

naturally occurring parameters (e.g., naturally occurring metals, temperature, pH, etc.) in the water supply are the only pollutants of concern<sup>1</sup>;

- c.** Discharges resulting from well development, test pumping, maintenance, and purging of water supply or geothermal wells where sediment and naturally occurring parameters (e.g., naturally occurring metals or salts, temperature, pH, etc.) in area ground water and chlorine and chlorine disinfection byproducts from well disinfection are the only pollutants of concern<sup>1</sup>;
- d.** Hydrostatic testing, maintenance, repair, and disinfection of potable water supply pipelines, tanks, and reservoirs, where chlorine, chlorine byproducts, and naturally occurring parameters (e.g., naturally occurring metals, temperature, pH, etc.) in the water supply are the only pollutants of concern<sup>1</sup>;
- e.** Hydrostatic testing of newly constructed pipelines, tanks, and reservoirs used for purposes other than potable water supplies, where chlorine, chlorine byproducts and naturally occurring parameters (e.g., naturally occurring metals, temperature, pH, etc.) in the water supply are the only pollutants of concern;
- f.** Subterranean seepage dewatering (dewatering of structures situated below ground level such as basements, roadways, etc.) where sediment and naturally occurring parameters (e.g., naturally occurring metals or salts, temperature, pH, etc.) in the area groundwater are the only pollutants of concern;
- g.** Discharges resulting from dewatering of uncontaminated dredge spoils, where sediment and naturally occurring parameters (e.g., naturally occurring metals or salts, temperature, pH, etc.) are the only pollutants of concern;
- h.** Discharges of seafood rinse water to ocean and bay waters, generated from rinsing, aeration, and ice melting operations performed on seafood prior to entering a processing facility;
- i.** Discharges of brine from small, portable, government-operated desalination facilities, to ocean waters<sup>2</sup>;
- j.** Discharges of treated bilge water from harbor pump-out facilities to ocean waters<sup>3</sup>; and
- k.** Other similar types of point source discharges that pose a low threat to water quality and beneficial uses, yet must be regulated under an NPDES permit. This could include discharges that result from fire hydrant testing or flushing air conditioning condensate

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<sup>1</sup> Discharges may be authorized under this General Order if they are not otherwise eligible for coverage under the State Water Resources Control Board (State Water Board) Water Quality Order 2014-0194-DWQ, General Permit No. CAG140001, *Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Surface Waters*.

<sup>2</sup> Discharges of brine from desalination facilities may be eligible for coverage under this General Order provided that the brine discharge meet the applicability provision for small, portable, temporary government run facilities detailed in Section III.M.1.a of the 2015 Desalination Amendment to the California Ocean Plan.

<sup>3</sup> Discharges of treated bilge water may be eligible for coverage under this General Order provided that the harbor or marina is either certified as a Clean Marina under the Clean Marina CA program or other equivalent third party certification program, or can demonstrate that the treatment facilities adequately and reliably remove exotic species, human wastes, hydrocarbons, and other pollutants of concern.

if these discharges are discharged directly to a surface water body or to a storm drain system that is not regulated under an NPDES permit.

2. Authorized discharges are subject to all the requirements and provisions set forth in this General Order.
3. **Ineligible Discharges.** The following discharges shall not be eligible for coverage under this General Order:
  - a. Discharges from drinking water systems that are eligible for coverage under the State Water Board's Water Quality Order 2014-0194-DWQ, General Permit No. CAG140001, *Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Surface Waters*;
  - b. Discharges which, do not meet the definition of low threat as contemplated by this General Order;
  - c. Discharges that are insufficiently characterized and thereby preclude a determination as to suitability for coverage under this General Order;
  - d. Discharges that would require extensive biological, physical, or chemical treatment to meet effluent limitations or water quality objectives or criteria;
  - e. Discharges that have the potential to cause acute or chronic toxicity to aquatic life in the receiving waters;
  - f. Discharges from groundwater cleanup projects, including but not limited to sites polluted by industrial activities, above ground or underground leaking tanks, and agricultural (e.g., farming) practices. Discharges of highly treated groundwater to surface waters following extraction and cleanup of groundwater polluted with petroleum hydrocarbons and volatile organic compounds should apply for coverage under Order No. R1-2016-0034 or future renewals or other applicable NPDES permits.
  - g. Discharges of groundwater which have been polluted by industrial activities, above ground or underground leaking tanks, or agricultural (e.g., farming) practices, even if the project and/or proponent has no connection with the pollution;
  - h. Discharges that contain chemical, physical, or biological pollutants or properties that may adversely impact beneficial uses and/or exceed any applicable water quality objective or criteria (chemical pollutants of concern include, but are not limited to industrial chemicals, chlorine, chloramine, chlorinated hydrocarbons, or organic wastes, herbicides, pesticides, oil and grease, bacteria, radioactivity, nutrients and salinity; biological properties of concern include, but are not limited to bacteria, algae, or undesirable aquatic organisms (e.g., mosquito larvae or exotic species); and physical properties of concern include, but are not limited to, temperature, dissolved oxygen, pH, conductivity, and turbidity (sediment));
  - i. Discharges that have the potential to cause or contribute to the impairment of a receiving water that is listed as impaired on the CWA section 303(d) list;
  - j. Discharges that would create nuisance conditions, such as vector problems, erosion, sedimentation, or localized flooding that cannot be mitigated through the implementation of BMPs;

- k. Discharges that could adversely affect a listed endangered or threatened species or their critical habitat;
  - l. Discharges to Areas of Special Biological Significance (ASBS);
  - m. Discharges that could have a significant impact on cultural resources, aesthetics, or air quality that cannot be mitigated;
  - n. Discharges that could alter the existing drainage pattern of the discharge site or surrounding area or result in downstream erosion;
  - o. Discharges that do not consist solely of the discharge of low threat water. For example, if a low threat discharge mixes with other discharges (e.g., storm water, domestic wastewater, or industrial process wastewater) prior to contacting receiving water, the other discharges must be covered under a separate and valid NPDES permit or WDRs, if required;
  - p. Discharges from industrial facilities that are subject to Effluent Limitations Guidelines promulgated by the U.S. EPA pursuant to CWA section 304(b), which limits the discharge of pollutants from these facilities;
  - q. Discharges that are not consistent with State and federal antidegradation policies; and
  - r. Discharges that result from releases from pipeline breaks or other spills.
4. Owners and operators of facilities that are deemed ineligible for coverage under this General Order may seek authorization from the Regional Water Board to discharge under an individual NPDES permit or a State or Regional Water Board general order.
5. This General Order does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharge of pollutants, that are not part of the normal operations of the facility as described in the NOI, or any pollutants that are not ordinarily present in such waste streams. In instances where discharges include pollutants other than those authorized by this General Order, or where applicants encounter particularly difficult pollutant control situations, the owner/operator may be required to submit an application for an individual NPDES permit.

## II. NOTIFICATION REQUIREMENTS

### A. General Order Application

1. It is the responsibility of the Permittee to obtain coverage under this General Order prior to commencement of any discharge to surface waters. To apply for coverage under this General Order, which serves as a NPDES permit, the applicant must submit the following:
- a. A complete NOI, including all of the information required by the NOI, as detailed in Attachment B, to the Executive Officer.
  - b. A Best Management Practices and Pollution Prevention (BMP/PP) Plan as outlined in Attachment B-1. Applicants seeking permit coverage for a project with more than one proposed discharge point may request monitoring of representative discharge points in lieu of monitoring all discharge points, provided that the NOI and BMP/PP provide sufficient information to demonstrate that the selected discharge point appropriately

represents the remaining discharge points. Flow must be measured at all discharge points.

- c. The appropriate first annual fee as required by Title 23 of the CCR, Division 3, Chapter 9, Article 1. The current fee schedule is available at the following website:  
<http://www.waterboards.ca.gov/resources/fees>.

## 2. NOI Submittal Deadlines

- a. **Existing Permittees.** As of the effective date of this Order, Permittees covered under Order No. R1-2015-0003 are automatically enrolled under this General Order, provided that the NOI submitted under Order No. R1-2009-0045 or Order No. R1-2015-0003 adequately characterizes the discharge and the discharge is compliant with all terms of this General Order. These Permittees shall comply with all requirements of this General Order beginning on the effective date. Permittees that are reenrolled shall comply with all provisions of this General Order.
- b. **New Permittees.** Applicants who are seeking authorization to discharge under this General Order for the first time shall submit an NOI at least 90 days in advance of the proposed discharge start date or for existing discharges not covered by a NPDES permit, upon notification by the Regional Water Board to provide time for review of the NOI and submittal of additional information that may be necessary to complete the NOI. This time period may be waived by the Executive Officer.

## B. General Order Coverage

- 1. **Existing Permittees.** The Executive Officer will provide a Notice of Applicability (NOA) letter to existing Permittees (those covered under Order No. R1-2015-0003) that coverage under the General Order will continue.
- 2. **New Permittees**
  - a. Following Regional Water Board staff review of a submitted NOI, the Permittee will receive one of the following from the Executive Officer:
    - i. A request for additional information.
    - ii. An NOA letter authorizing the discharges identified in the NOI and identifying the effective date of permit coverage.
    - iii. Written notice that the proposed discharge is ineligible for coverage under this General Order and whether or not the discharge is eligible for coverage under another general or individual order.
  - b. The Executive Officer will place a notice of enrollment on the Regional Water Board's website.
  - c. In no case may the discharge occur until the applicant receives an NOA letter confirming coverage under this General Order or another permit issued or adopted by the State or Regional Water Board.
- 3. **All Permittees**
  - a. Pursuant to NPDES regulations at 40 C.F.R. section 122.28 (b)(2), the Executive Officer has the authority to require a Permittee to comply with the conditions of this General

Order. Such a Permittee shall be obligated to meet all discharge prohibitions, effluent limitations, receiving water limitations, provisions, and monitoring and reporting requirements of this General Order.

- b.** Permittees who fail to submit an NOI and/or filing fee identified in section II.A of this General Order prior to initiating a discharge will be deemed out of compliance with this General Order and subject to all penalties allowable pursuant to applicable provisions of the CWA and the California Water Code, including section 13385 thereof.
- c.** If multiple discharges (either by the same or different Permittees) are proposed into the same receiving water during a similar time period, the Executive Officer may condition the timing of the permit coverage for one or more discharges, if necessary, to reduce potential cumulative impacts.
- d.** Coverage under this General Order may be denied or revoked if it is determined that:
  - i.** There are alternative means to the discharge;
  - ii.** A discharge contains pollutants that may adversely affect the beneficial uses of the receiving water and/or exceed applicable water quality objectives or criteria;
  - iii.** The discharge has the reasonable potential to adversely impact the beneficial uses of the receiving water and/or cause an exceedance of applicable water quality objectives or criteria; or
  - iv.** The Permittee violates provisions of this General Order or the discharge is not consistent with information provided in the NOI.
- e.** The Regional Water Board Executive Officer may require any applicant requesting coverage under this General Order to apply for and obtain an individual NPDES permit in accordance with 40 C.F.R. section 122.28(b)(3)(i). Circumstances where an individual NPDES permit may be required include, but are not limited to, where the applicant is not in compliance or is not expected to be in compliance with the terms and conditions of this General Order, or where a total maximum daily load (TMDL) has been completed for a water body approved after the effective date of this General Order. Applicants proposing to discharge to a water body with an approved TMDL, or to a water body listed on the State's CWA section 303(d) list, will be evaluated on a case-by-case basis for coverage under this General Order or coverage under an individual permit.
- f.** In accordance with 40 C.F.R. section 122.28(b)(3)(iii), any Permittee may request to be excluded from coverage under a general NPDES permit by applying for an individual NPDES permit. This request must provide justification supporting the request for an individual NPDES permit and reasons why coverage under this General Order is not appropriate. Upon receipt of the request and application, the Executive Officer shall determine if an individual NPDES permit should be issued.

### **C. Termination of Coverage**

- 1.** Within 30 days following permanent termination of a discharge or discharges authorized under this General Order, the Permittee shall submit the Notice of Termination (NOT) of coverage under the General Order provided as Attachment G. Upon submission of the NOT,

the Permittee shall no longer be authorized to discharge under this General Order. The Permittee is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee associated with this General Order until the Permittee submits the NOT and receives notification of termination from Regional Water Board staff.

2. When the Regional Water Board issues an individual NPDES permit or WDRs with more specific requirements to a Permittee for a discharge that is otherwise covered by this General Order, the applicability of this General Order to that Permittee is automatically terminated on the effective date of the individual permit or WDRs.

#### **D. Permit Expiration**

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.

### **III. FINDINGS**

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board), finds:

- A. Legal Authorities.** This General Order is 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 California Water Code (commencing with section 13370). It shall serve as a NPDES permit authorizing low threat point source discharges to surface waters of the United States at the discharge locations described in the individual NOIs subject to the Waste Discharge Requirements (WDRs). This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- B. Basis and Rationale for Requirements.** The Regional Water Board developed the requirements in this General Order based on readily available information for similar discharges. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this General Order, is hereby incorporated into and constitutes Findings for this General Order. Attachments A through E and Attachment G are also incorporated into this General Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections V.C, V.D, and VI.C of this General Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- D. Notification of Interested Parties.** The Regional Water Board has notified interested agencies and persons, including Permittees enrolled under Order No. R1-2015-0003 of its intent to prescribe WDRs for the 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.
- E. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to adoption of this General Order. Details of the Public Hearing are provided in the Fact Sheet.

**IV. DISCHARGE PROHIBITIONS**

- A.** The discharge of any wastes, other than those that meet the eligibility criteria in section I of this General Order, are prohibited unless the Permittee obtains coverage under another general or individual order that regulates the discharge of such wastes.
- B.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code, is prohibited.
- C.** The discharge of waste at any point not described by the Permittee in the NOI or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.
- D.** Any low threat discharge in excess of the flow rate, volume, or duration described by the Permittee in its NOI, or as authorized by the Executive Officer, is prohibited.
- E.** Discharges containing pollutants which exceed applicable water quality objectives or criteria, or discharges which, wholly or in combination with other discharges, cause or contribute to exceedances of applicable water quality criteria or objectives established by the Basin Plan, Ocean Plan, or CWA for surface waters are prohibited and are precluded from coverage under this General Order. Applicable numeric water quality criteria and objectives are presented in Attachment C of this General Order.
- F.** The discharge of polluted groundwater to waters of the State is prohibited.
- G.** The discharge of detectable levels of petroleum, petroleum constituents, or volatile halogenated compounds from construction dewatering sites, treated bilge water, or other similar low-threat discharges is prohibited<sup>4</sup>.
- H.** The discharge of domestic, agricultural, commercial, and/or industrial process waste is prohibited.
- I.** The discharge of an effluent with constituents in excess of waste load allocations identified in any TMDL applicable to the location of the discharge is prohibited.
- J.** The contact of low threat discharges with contaminated soil or groundwater is prohibited.
- K.** The discharge of elevated temperature wastes<sup>5</sup> to Cold Freshwater Habitat (COLD) interstate waters is prohibited.

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<sup>4</sup> For the purposes of this General Order, levels of detection are as follows:

<u>Constituent</u>	<u>Units</u>	<u>Detection Limit</u>
Petroleum Hydrocarbons	µg/L	50
Benzene	µg/L	0.5
Toluene	µg/L	0.5
Xylene	µg/L	0.5
Ethylbenzene	µg/L	0.5
Volatile Halogenated Compounds	µg/L	0.5

<sup>5</sup> Elevated temperature waste is defined in the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California as “Liquid, solid, or gaseous material, including thermal waste discharged at a temperature higher than the natural temperature of the receiving water. Irrigation return water is not considered elevated temperature waste for the purpose of this plan.”

**V. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

During the effective period of this General Order, the Permittee is authorized to discharge from the discharge point(s) specified in the NOI within the limits and subject to the conditions set forth in this General Order. This General Order authorizes the discharge resulting from project site processes, waste streams, and operations that have been clearly identified in the NOA.

**A. Effluent Limitations**

The discharge of pollutants shall be controlled and minimized through the implementation of treatment and BMPs identified in the NOI and BMP/PP Plan.

**1. Final Effluent Limitations – Applicable to Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

- a. The discharge of low threat water to inland surface waters, enclosed bays, and estuaries shall maintain compliance with the following effluent limitations at the discharge point(s) specified in the NOI.

**Table 4. Effluent Limitations for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

Parameter	Units	Effluent Limitations <sup>1</sup>				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids (TSS)	mg/L	10	15	30	--	--
pH	standard units	--	--	--	6.5 <sup>2</sup>	8.5 <sup>2</sup>
Settleable Solids	mL/L	--	--	--	--	0.1 <sup>3</sup>
Total Dissolved Solids	mg/L	4				
Chlorine, Total Residual	mg/L	0.01 <sup>5</sup>	--	0.02 <sup>5</sup>	--	--
<b>Table Notes:</b>						
1. See Definitions in Attachment A and Compliance Determination discussion in section VIII of this Order.						
2. For waters listed in Table C-19 of Attachment C (Table 3-1 of the Basin Plan), the pH water quality objectives in Table C-19 of Attachment C shall apply as effluent limitations. For waters not listed in Table C-19 of Attachment C and where pH objectives are not prescribed, the pH of the discharge shall be not less than 6.5 nor greater than 8.5.						
3. Effluent shall not contain any measurable settleable solids, using a detection limit of 0.1 mL/L.						
4. For waters listed in Table C-19 of Attachment C (Table 3-1 of the Basin Plan), the total dissolved solids water quality objectives in Table C-19 of Attachment C shall apply as effluent limitations.						
5. Applicable to any discharge of water that is chlorinated.						

**2. Final Effluent Limitations – Applicable to Discharges to Ocean Waters**

- a. The discharge of low threat water to ocean waters shall maintain compliance with the following effluent limitations at the discharge point(s) specified in the NOI.

**Table 5. Effluent Limitations for Discharges to Ocean Waters**

Parameter	Units	Effluent Limitations <sup>1</sup>				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Grease and Oil	mg/L	25	40	--	--	75
Suspended Solids	mg/L	--	--	--	--	60
Settleable Solids	mL/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	standard units	--	--	--	6.0	9.0
Chlorine, Total Residual	mg/L	--	--	0.008 <sup>2</sup>	--	

**Table Notes:**

- See Definitions in Attachment A and Compliance Determination discussion in section VIII of this Order.
- Applicable to any discharge of water that is chlorinated.

**3. Narrative Effluent Limitations**

Effluent shall not contain substances that:

- Float or become floatable upon discharge.
- Form sediments that degrade aquatic life.
- Accumulate to toxic levels in surface waters, sediments, or biota.
- Significantly decrease the natural light to aquatic life.
- Result in aesthetically undesirable discoloration to the ocean surface.

**B. Other Discharge Specifications**

- Oil or oily materials, chemicals, refuse, or other materials that may cause pollution shall not be stored or deposited in areas where they may be picked up by the low threat discharge and discharged to surface waters. Any spill of such materials shall be contained, removed, and cleaned up immediately.
- Discharges shall not cause the velocity and/or volume of discharge to modify the existing physical characteristics of a water body (hydromodification). Discharges shall be controlled at the lowest possible flow rate to minimize potential impacts on aquatic life and habitat and to reduce erosion and sedimentation. Discharge locations must be selected to avoid sensitive habitats. BMPs shall include adequate velocity dissipation devices, when necessary to prevent and minimize erosion, stream scouring, increases in turbidity, sedimentation, and any other potential adverse impacts to water quality and beneficial uses of the receiving waters.
- Low threat discharges shall not be located within 500 feet of the intake for a domestic drinking water supply. Discharges shall be conducted in a manner that avoids potential pollution to private and public water supply.
- Only that volume, rate, and duration of the discharge that remains after utilization of other reasonable alternatives shall be allowed to discharge to the receiving water.

**C. Land Discharge Specifications**

Land discharge is a means by which a Permittee enrolled under this General Order may reduce the volume and duration of discharge to surface waters. Such a discharge shall obtain the appropriate Permit coverage (WDR or waiver of WDRs).

**D. Water Recycling Specifications**

The Regional Water Board encourages Permittees authorized under this General Order to recycle discharge water. Low threat discharges authorized under this General Order that are recycled are not required to obtain any other WDRs if the discharge is collected and recycled for landscape irrigation or other uses in a manner that augments the existing supply, or if the discharge is directly or indirectly discharged to storm water capture basin(s), low impact development features, or other groundwater recharge system(s). Any low threat discharge to a storm water treatment feature shall not undermine the treatment function(s) of the storm water treatment feature. The discharge shall comply with the following recycled water specification:

1. Reuse of the discharge shall not cause the creation of pollution or nuisance conditions.

**VI. RECEIVING WATER LIMITATIONS**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and the Ocean Plan (Surface Water Limitations) and are a required part of this General Order. Receiving water conditions not in conformance with the limitation are not necessarily a violation of this General Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the Monitoring and Reporting Program (MRP) (Attachment E) and the NOA. The Regional Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred.

**A. Surface Water Limitations – Inland Waters, Enclosed Bays, and Estuaries**

Receiving water limitations for discharges to inland waters, enclosed bays, and estuaries are based on water quality objectives contained in the Basin Plan and are a required part of this General Order. Compliance with receiving water limitations shall be measured at the monitoring locations described in the MRP and the NOA. Note: Table 3-1 of the Basin Plan is included in this General Order in Table C-19 of Attachment C. Authorized discharges shall not cause violations of the following receiving water limitations established for inland waters, enclosed bays, and estuaries of the North Coast Region.

1. Authorized discharges shall not cause the dissolved oxygen (DO) concentration of the receiving water to be depressed below 5.0 mg/L in receiving waters with beneficial use designations for marine habitat, inland saline water habitat, or warm freshwater habitat, below 6.0 mg/L in receiving waters with the beneficial use designation of cold freshwater habitat, nor below 9.0 mg/L in receiving waters with the beneficial use designation of spawning, reproduction, and/or early development.
2. In those waterbodies for which the aquatic life-based DO requirements are unachievable due to natural conditions<sup>6</sup>, site-specific background DO requirements can be applied<sup>7</sup> as

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<sup>6</sup> Natural conditions are conditions or circumstances affecting the physical, chemical, or biological integrity of water that are not influenced by past or present anthropogenic activities.

<sup>7</sup> Upon approval from the Regional Water Board Executive Officer.

water quality objectives by calculating the daily minimum DO necessary to maintain 85 percent DO saturation during the dry season and 90 percent DO saturation during the wet season under site salinity, site atmospheric pressure, and natural receiving water temperature<sup>8</sup>. In no event may controllable factors reduce the daily minimum DO below 6.0 mg/L.

3. For the protection of estuarine habitat (EST), the DO concentration of enclosed bays and estuaries shall not be depressed to levels adversely affecting beneficial uses as a result of controllable water quality factors.
4. Dissolved oxygen concentrations for the Klamath River Watershed shall conform to the waterbody-specific objectives listed in Table 3-1a of the Basin Plan (Table C-20 of Attachment C).
5. Authorized discharges shall not cause or contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan (Table C-19 of Attachment C) for specific conductance, total dissolved solids, hardness, and boron.
6. Unless more stringent water quality objectives for pH are established for a specific receiving water by Table 3-1 of the Basin Plan (Table C-19 of Attachment C), authorized discharges shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, a discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.
7. Authorized discharges shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.
8. Authorized discharges shall not alter the sediment load and suspended sediment discharge rate to receiving waters in such a manner as to cause nuisance or adversely affect beneficial uses.
9. Authorized discharges shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
10. Authorized discharges shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
11. Authorized discharges shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
12. Authorized discharges shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

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<sup>8</sup> The method(s) used to estimate natural temperatures for a given waterbody or stream length must be approved by the Executive Officer and may include, as appropriate, comparison with reference streams, simple calculation, or computer models.

13. Authorized discharges shall not contain substances that result in deposition of material in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
14. Authorized discharges shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
15. Authorized discharges shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Board.
16. Authorized discharges shall not cause alteration of natural temperature of receiving waters unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall discharges cause an increase of the receiving water by more than 5°F above natural receiving water temperature <sup>9</sup>. Authorized discharges to coastal and interstate waters and enclosed bays and estuaries must comply with receiving water objectives identified in the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan).
17. Authorized discharges shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. Authorized discharges shall not cause bioaccumulation of pesticide concentrations in bottom sediments or aquatic life to levels that cause nuisance or adversely affect beneficial uses.
18. Authorized discharges shall not cause receiving waters to contain concentrations of pesticides in excess of Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.
19. Authorized discharges shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.
20. Authorized discharges shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this General Order in accordance with such more stringent standards.

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<sup>9</sup> For the Trinity River, the following temperature objectives shall apply in the receiving water:

<u>Daily Average Not to Exceed</u>	<u>Period</u>	<u>River Reach</u>
60°F	July 1 – Sept. 14	Lewiston Dam to Douglas City Bridge
56°F	Sept 15 – Oct. 1	Lewiston Dam to Douglas City Bridge
56°F	Oct. 1 – Dec. 31	Lewiston Dam to confluence of North Fork Trinity River

21. Authorized discharges shall not cause concentrations of chemical constituents to occur in excess of MCLs and secondary MCLs (SMCLs) established for these pollutants in title 22, division 4, chapter 15, article 5.5, section 64444 and article 16 section 64449 of the CCR.
22. Authorized discharges shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or indigenous aquatic life, or in excess of MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, section 64442 and 64443 of the CCR.
23. Authorized discharges shall be consistent with the bacteria water quality objective for all waters where the salinity is equal to or less than 1 part per thousand (ppt) 95 percent or more of the time during the calendar year is: a six week rolling geometric mean of *Escherichia coli* (*E. coli*) not to 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. Surface Water Limitations – Ocean Waters**

Receiving water limitations for discharges to ocean waters are based on water quality objectives contained in the Ocean Plan and are a required part of this General Order. Compliance with receiving water limitations shall be measured at the monitoring locations described in the MRP and the NOA. Authorized discharges shall not cause violations of the following receiving water limitations established for ocean waters of the North Coast Region.

**1. Ocean Plan**

**a. Bacterial Characteristics**

- i. **Water-Contact Standards.** Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated for water contact recreation use by the Regional Water Board, but including all kelp beds, the following bacteriological objectives shall be maintained throughout the water column:
  - (a) A 30-day geometric mean of fecal coliform density not to exceed 200 per 100 mL, calculated based on the five most recent samples from each site, and a single sample maximum not to exceed 400 per 100 mL.
  - (b) A 6-week rolling geometric mean of enterococci not to exceed 30 cfu per 100 mL, calculated weekly, and a statistical threshold value of 110 cfu per 100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.
- ii. **Shellfish Harvesting Standards.** At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacterial objectives shall be maintained throughout the water column:

- (a) The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL.

**iii. Physical Characteristics**

- (a) Floating particulates and oil and grease shall not be visible.
- (b) The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
- (c) Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
- (d) The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

**iv. Chemical Characteristics**

- (a) The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.
- (b) The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
- (c) The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
- (d) The concentration of substances set forth in chapter II, Table 1 of the Ocean Plan shall not be increased in marine sediments to levels which would degrade indigenous biota.
- (e) The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
- (f) Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.
- (g) Discharges shall not cause exceedances of water quality objectives for ocean waters of the state established in chapter II, Table 1 of the Ocean Plan.
- (h) Discharge of radioactive waste shall not degrade marine life.

**v. Biological Characteristics**

- (a) Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.
- (b) The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
- (c) The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

**vi. General Standards**

- (a)** The discharge shall not cause a violation of any applicable water quality standard for the receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder.
- (b)** Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.
- (c)** Waste discharged to the ocean must be essentially free of:
  - (1)** Material that is floatable or will become floatable upon discharge.
  - (2)** Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.
  - (3)** Substances which will accumulate to toxic levels in marine waters, sediments or biota.
  - (4)** Substances that significantly decrease the natural light to benthic communities and other marine life.
  - (5)** Materials that result in aesthetically undesirable discoloration of the ocean surface.
- (d)** Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.
- (e)** Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:
  - (1)** Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.
  - (2)** Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.
  - (3)** Maximum protection is provided to the marine environment.
  - (4)** The discharge does not adversely affect recreational beneficial uses such as surfing and beach walking.

**C. Groundwater Limitations**

- 1.** The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Basin Plan) and BMPs, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause or contribute to levels of chemical constituents in groundwater that exceed the MCLs and SMCLs established for these pollutants in the California Code of Regulations, title 22, division 4, chapter 15, article 4, sections 64435 (Tables 2 and 3) 64431, and article 5.5, section 64444, and article 16 section 64449 and the Basin Plan.
3. The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause groundwater to contain levels of radionuclides in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.
4. The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
5. The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause the median of the most probable number of coliform organisms over any 7-day period to exceed 1.1 MPN/100 mL or 1 colony/100 mL in groundwaters used for domestic or municipal supply (MUN).
6. The collection, treatment, storage, and disposal of low threat wastewater or use of recycled water shall not cause groundwater to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances.

## VII. PROVISIONS

### A. Standard Provisions

1. **Federal Standard Provisions.** All Permittees shall comply with all Standard Provisions included in Attachment D of this General Order
2. **Regional Water Board Standard Provisions.** All Permittees shall comply with the following Regional Water Board standard 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. Failure to comply with provisions or requirements of this General Order, or violation of other applicable laws or regulations governing discharges from a Permittee's facility, may subject the Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
  - b. In the event that a Permittee does not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, receiving water limitation, or provision of this General Order that may result in a significant threat to human health or the environment that results in a discharge to a drainage channel or a surface water, or if there is evidence that the discharge has adversely impacted any beneficial use of the receiving water, the Permittee shall notify Regional Water Board staff within 24 hours of having knowledge of such noncompliance. Spill notification and reporting

shall be conducted in accordance with section V.E of Attachment D and section VII.F of the MRP (Attachment E).

**B. Monitoring and Reporting Program (MRP) Requirements**

All Permittees shall comply with the MRP, included as Attachment E to this General Order, and future revisions thereto.

**C. Special Provisions**

**1. Reopener Provisions**

- a. Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this General Order and make modifications in accordance with such revised standards.
- b. 303(d)-Listed Pollutants.** If a Total Maximum Daily Load (TMDL) is adopted and is applicable to a discharge(s) authorized by this General Order, this General Order may be reopened to incorporate the requirements of the TMDL. TMDLs for bacteria, nitrogen, phosphorus, dissolved oxygen, sediment, and temperature are currently applicable and/or under development for various watersheds within the North Coast Region. The Permittees shall refer to Chapter 4 of the Basin Plan to determine whether there are any applicable TMDLs for the receiving water. In addition, the Regional Water Board may include additional provisions necessary for Permittees to comply with applicable TMDLs and/or consider revising this General Order to make it consistent with any Regional Water Board decisions arising from various petitions for re-hearing and litigation concerning the SIP, 303(d) list, and TMDL program.
- c. Total Chlorine Residual.** If a statewide policy for total residual chlorine is adopted during the term of this General Order, this General Order may be reopened and modified to maintain consistency with the statewide policy.

**2. Special Studies, Technical Reports and Additional Monitoring Requirements – Not Applicable**

**3. Best Management Practices and Pollution Prevention**

- a. Best Management Practices and Pollution Prevention (BMP/PP) Plan**
  - i.** Permittees enrolled under this General Order shall develop and implement a BMP/PP Plan to identify and implement site-specific BMPs and pollution prevention measures to reduce or prevent the discharge of wastes and pollutants to waters of the North Coast Region. The BMP/PP Plan shall include, at a minimum, the elements identified in Attachment B-1 and shall be submitted with the NOI.
  - ii.** When low threat discharges will continue for more than 1 year, the Permittee shall conduct a compliance evaluation before the end of each year (including the first year) to determine the effectiveness of the BMP/PP Plan in reducing and

preventing the discharge of wastes and pollutants. The compliance evaluation shall include:

- (a) A review of all visual observation records, inspection records, and sampling and analysis results of BMPs and PP measures implemented.
- (b) A review of visual inspections of all potential pollutant sources for evidence of, or the potential for, the discharge or pollutants.
- (c) A review and evaluation of all BMPs and PP measures to determine whether the BMPs and PP measures are adequate, properly implemented and maintained, and determination of what additional BMPs and PP measures are necessary.

Following the compliance evaluation, the BMP/PP Plan shall be revised, as appropriate, and submitted to the Regional Water Board with documentation of the results of the compliance evaluation. Revisions to the BMP/PP Plan shall be implemented within 90 days following completion of the compliance evaluation.

- iii. The BMPs and PP measures identified in the BMP/PP shall be implemented prior to and during any discharge.
- iv. The Permittee shall modify BMPs and PP measures as necessary to maintain compliance with the requirements of this Order. If monitoring results or other available information demonstrates that the discharge is not in compliance, the Permittee shall validate the effectiveness of any new or revised BMPs and PP measures to achieve the requirements of this Order. All noncompliance and corresponding corrective actions to address noncompliance shall be reported to the Regional Water Board, as required by section VII.A.2.b of this Order and section VII.F of the MRP.
- v. The Permittee shall make available a documented log of all BMPs and PP measures implemented for its discharges to State and Regional Water Board staff upon request. The Permittee shall modify its BMP/PP Plan as necessary to maintain compliance with this General Order.

**b. Mitigation Measures**

Permittees enrolled under this General Order are required to implement BMPs and PP measures in accordance with a BMP/PP Plan submitted with each Permittee's NOI. In order to assure that BMPs and PP measures do not cause adverse environmental impacts, each Permittee shall implement the following mitigation measures, as applicable:

- i. Discharge volumes and flow rates and pollutants shall be minimized to reduce impacts on beneficial uses of the receiving water.
- ii. BMPs and PP measures shall be implemented for periods of time corresponding with the period of discharge. BMPs that are no longer needed shall be removed once a discharge is completed.
- iii. BMPs and PP measures shall be sized properly for the discharge that is enrolled under this General Order.

- iv.** BMPs and PP measures shall be monitored to assure that they are working correctly.
- v.** BMPs and PP measures that could result in stagnant water shall be inspected regularly to assure that the treatment devices are not clogged, pooling water, or causing odors or other nuisance conditions such as vectors. If deficiencies are identified, the Permittee shall contact the appropriate Regional Water Board staff person and appropriate corrective measures shall be implemented immediately to correct any deficiencies.
- vi.** BMPs and PP measures shall be carefully sited and/or camouflaged so they are not unsightly.
- vii.** During the installation of any BMPs and PP measures that require earth movement, moisture shall be used to reduce the transfer of particulates and dust into the air.
- viii.** Prior to installing BMPs and PP measures that involve substantial earth movement, the Permittee shall consult with appropriate federal, state, and local agencies, including, but not limited to the county the project is located in, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service, and implement any mitigation measures identified by the agencies to avoid impacts to rare, threatened, or endangered species; wildlife migration; and/or use of native wildlife nursery areas. If appropriate, to avoid conflicts with any of these plans, the timing and/or location of the BMPs and PP measures must be adjusted to reduce any potential conflict. If such adjustments cannot be made, the BMPs and PP measures would need to be changed to avoid any adverse impacts.
- ix.** During construction of any structural BMPs that requires earth movement, the Permittee shall minimize off-site sediment runoff or deposition under general construction storm water WDRs and/or through the construction program of the applicable municipal separate storm water system WDR. Both of these permits require that erosion impacts minimize or eliminate impacts on the receiving water.
- x.** BMPs shall be consistent with the requirements of any existing Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. If appropriate, to avoid conflicts with any of these plans, the timing and/or location of the BMPs must be adjusted to reduce any potential conflict. If such adjustments cannot be made, the BMPs would need to be changed to avoid any adverse impacts.
- xi.** BMPs that require substantial earth movement shall not be installed in riparian or federally protected wetland areas.
- xii.** If BMPs installation involves excavation activities, a cultural resources investigation shall be conducted before any substantial disturbance of land that has not been disturbed previously. The cultural resources investigation will include, at a minimum, a records search for previously identified cultural resources and previously conducted cultural resources investigations of the

project parcel and vicinity. This record search will include, at a minimum, contacting the appropriate information center of the California Historical Resources Information System, operated under the auspices of the California Office of Historic Preservation. In coordination with the information center or a qualified archaeologist, a determination shall be made regarding whether previously identified cultural resources will be affected by the proposed project and if previously conducted investigations were performed to satisfy the requirements of CEQA. If not, a cultural resources survey shall be conducted. The purpose of this investigation will be to identify resources before they are affected by a proposed project and avoid the impact. If the impact is unavoidable, mitigation will be determined on a case-by-case basis, as warranted.

- xiii.** Hazardous materials stored and used at the site of a low threat discharge shall be properly stored and handled to assure that hazardous materials are not discharged.
- xiv.** BMPs shall be implemented in a manner that does not cause the alteration of the existing drainage pattern.
- xv.** BMPs that involve discharges to a local sanitary sewer system shall obtain proper permission and permitting from the owner/operator of the sanitary sewer system.
- xvi.** BMPs that involve a storm drain system to be retrofitted or reconfigured shall obtain permission and any necessary permitting from the municipality that owns the storm water system.
- xvii.** Solid or liquid wastes generated during implementation of a BMP shall be disposed of properly.
- xviii.** BMPs that involve dredge or fill shall not be constructed until permit coverage has been received under any other applicable permit (e.g., CWA 401 and 404 permits, WDRs, or waiver of WDRs).

**4. Construction, Operation, and Maintenance Specifications**

- a. Proper Operation and Maintenance.** This General Order (Attachment D, Standard Provision I.D) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this General Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.
- b. Treatment Systems and BMPs.** Treatment systems and BMPs shall be constructed, operated, and maintained in a manner that assures compliance with all requirements of this General Order.

**5. Special Provisions for Municipal Facilities (POTWs) – Not Applicable**

**6. Other Special Provisions**

- a. Storm Water**

- i. **Industrial Storm Water.** If applicable, authorized Permittees shall seek separate authorization to discharge under the requirements of the State Water Board's Water Quality Order No. 2014 0057-DWQ as amended by Order No. 2015-0122 DWQ, NPDES General Permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities* (or subsequent revisions of the Storm Water General Permit), which is not incorporated by reference in this General Order.
- ii. **Construction Storm Water.** If applicable, authorized Permittees shall seek separate authorization to discharge under the requirements of the State Water Board's Water Quality Order No. 2009-0009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ, NPDES General Permit No. CAS000002, *General Permit for Storm Water Runoff Discharges Associated with Construction Activity* (or subsequent revisions of the Construction General Permit), which is not incorporated by reference in this Order.

**7. Other Special Provisions – Not Applicable**

**VIII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in section V of this General Order will be determined as specified below.

**A. General**

Compliance with effluent limitations in section V of this General Order and water quality objectives/criteria in Attachment C shall be determined using sample reporting protocols defined in the MRP and Attachment B of this General Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of a pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported minimum level (ML).

**B. Multiple Sample Data**

When determining compliance with an effluent limitation in section IV.B of this Order or water quality objectives/criteria in Attachment C, and more than one sample result is available, the Permittee 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 Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. 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.
2. 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 middle values 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 and a value of zero shall be used for the ND or DNQ value in the median calculation for compliance purposes only.

Using a value of zero for DNQ or ND samples does not apply when performing reasonable potential or antidegradation analyses.

**C. Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection B, above, for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee will be considered out of compliance for that calendar month. The Permittee will only be considered out of compliance for days when the discharge occurs. If there are ND or DNQ results for a specific constituent in a calendar month, the Permittee shall calculate the median of all sample results within that month for compliance determination with the AMEL as described in section VIII.B, above.

**D. Average Weekly Effluent Limitation (AWEL)**

If the average (or when applicable, the median determined by subsection B, above, for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of noncompliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee will only be considered out of compliance for days when the discharge occurs. If there are ND or DNQ results for a specific constituent in a calendar week, the Permittee shall calculate the median of all sample results within that week for compliance determination with the AWEL as described in section VIII.B, above.

**E. Maximum Daily Effluent Limitation (MDEL)**

If a daily average concentration (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period.

**F. Instantaneous Minimum Effluent Limitation**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Noncompliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

### G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Noncompliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

### H. Bacteriological Limitations

- 1. Single Sample Maximum.** All single sample results are compared to single sample maximum limitations. Single sample results are only compared to the median, geometric mean, six-week rolling geometric mean, and statistical threshold value when sampling is required at the frequency required to properly assess compliance, as further stated in 2. through 5, below. Compliance with a single annual sample is determined in comparison to single sample maximum limitations only. If single sample maximums are routinely exceeded, the Regional Water Board may require additional sampling to assess whether the Permittee's discharge is the source of the exceedance in the receiving water.
- 2. Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. The median value is determined based on the number of data points in the set. 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, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.
- 3. Geometric Mean (GM).** The geometric mean is a type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean shall be calculated using the 5 most recent samples from a site using the following formula:  
$$GM = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$
, where x is the sample value and n is the number of samples taken.
- 4. Six-week Rolling Geometric Mean.** The rolling geometric mean shall be calculated using at least 5 sample results over a 6-week period from a site using the following

formula:

$GM = \sqrt[n]{(x_1)(x_2)(x_3)...(x_n)}$ , where x is the sample value and n is the number of samples taken.

5. **Statistical Threshold Value.** (1) The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. (2) The number of sample results should then be multiplied by 90 percent then rounded up to the nearest whole number. (3) Count the values in the data set starting from lowest to highest until the number indicated in step (2) is reached. (4) To be compliant with the statistical threshold value in Receiving Water Limitation VI.A.23, all sample results less than the point described in step 3 must be less than 100 MPN/100 mL.

## ATTACHMENT A – DEFINITIONS

### **Acute Toxicity**

A measurement of the toxic effect of a short-term exposure to an effluent as measured directly by an acute toxicity test. In aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute.

### **Areas of Special Biological Significance (ASBS)**

Those areas designated by the State Water Resources Control Board (State Water Board) as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

### **Arithmetic Mean ( $\mu$ )**

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:  $\Sigma x$  is the sum of the measured ambient water concentrations, and  $n$  is the number of samples.

### **Authorized Discharge**

Any discharge that is authorized pursuant to this National Pollutant Discharge Elimination System (NPDES) permit and meets the conditions set forth in this General Order.

### **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.

### **Best Management Practices (BMPs)**

Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, and solids or waste disposal.

### **Brine**

Byproduct of desalinated water having a salinity concentration greater than a desalination facility's intake source water.

### **Chlordane**

Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane

**Chronic Toxicity**

This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response. See also Test of Significant Toxicity.

**Community Water System**

A public water system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

**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.

**DDT**

Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

**Degrade**

Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

**Detected, but Not Quantified (DNQ)**

Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

**Dichlorobenzenes**

Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

**Dilution Credit**

The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

**Downstream Ocean Waters**

Waters downstream with respect to ocean currents.

**Dredged Material**

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as “spoil.”

**Drinking Water System**

A system regulated by the State Water Resources Control Board Division of Drinking Water or a local county department of health, with the primary purpose of conveying, treating, storing and distributing safe drinking water to at least 15 service connections used by yearlong residents or regularly serves at least 25 year around residents of the area served by the system.

**Drinking Water System Discharges**

Releases of flows from drinking water intakes, transmission, storage, pumping, treatment and distribution systems including flows due to : (1) system failures and pressure releases, (2) system development, testing and maintenance that is performed to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and State Water Board Division of Drinking Water permit requirements.

**Elevated Temperature Waste**

For the purposes of the Thermal Plan, is a liquid, solid, or gaseous material, including thermal waste discharged at a temperature higher than the natural temperature of the receiving water. Irrigation return water is not considered elevated temperature waste.

**Emergency Discharge**

A discharge due to a sudden, unexpected occurrence involving a clear and imminent danger demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services, including the provision of drinking water supplies in accordance with applicable drinking water statues or regulations.

**Enclosed Bays**

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 headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

**Endosulfan**

The sum of endosulfan-alpha and -beta and endosulfan sulfate.

**Estimated Chemical Concentrations**

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

**Estuaries and Coastal Lagoons**

Waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and saltwater occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, Russian, San Diego, and Otay Rivers. Estuaries do not include inland surface waters or ocean waters.

**Halomethanes**

The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

**HCH**

The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

**Initial Dilution**

The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

**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).

**Interstate Waters**

All rivers, lakes, artificial impoundments, and other waters that flow across or form a part of a boundary with other states or Mexico.

### **Kelp Beds**

For purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* plants throughout the water column.

### **Mariculture**

The culture of plants and animals in marine waters independent of any pollution source.

### **Material**

(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

### **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)**

The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

### **Minimum Level (ML)**

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.

### **Mixing Zone**

A limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

### **Natural Light**

Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

**Not Detected (ND)**

Those sample results less than the laboratory's MDL.

**Non-community Water System**

A water system that is not a community water system. A community water system is a water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 year around residents of the area served by the system.

**Non-transient Water System**

A water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year. Non-transient water systems are regulated by the State Water Board Division of Drinking Water.

**Notice of Applicability (NOA)**

A written notification issued by the NPDES permitting authority authorizing discharge under the terms and conditions of a general order.

**Notice of Intent (NOI)**

A written application submitted to the NPDES permitting authority seeking authorization to discharge under a general order.

**Numeric Action Level (NAL)**

a numeric threshold that triggers the need for implementing additional effective BMPs and/or treatment measures to reduce the amount of a pollutant or pollutants in a discharge. Exceedances of a NAL are not a violation of the permit, provided that additional effective BMPs and/or treatment measures are implemented.

**Ocean Waters**

The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

**PAHs (polynuclear aromatic hydrocarbons)**

The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

**PCBs (polychlorinated biphenyls)**

The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

**Persistent Pollutants**

Substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant-Free Wastewater**

Inflow and infiltration, stormwaters, and cooling waters and condensates which are essentially free of pollutants.

**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 Ocean Plan Table 1 pollutants 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 Regional 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**

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 or Regional Water Board.

**Reporting Level (RL)**

The RL is the ML (and its associated analytical method) chosen by the Permittee for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Shellfish**

Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

**Solids**

Sand, silt, or other debris collected from facility intake or source waters and accumulated waste material from aquaculture raceways and their quiescent zones, offline settling basins, full-flow settling basins, ponds, or other areas of accumulation.

**State Water Quality Protection Areas (SWQPAs)**

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

**Statistical Threshold Value (STV)**

For the bacteria water quality objective, the statistical threshold value is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population. See page 28 of this Order for further discussion.

**TCDD Equivalents**

The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

**Test of Significant Toxicity**

The statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). Test of Significant Toxicity (TST) was developed by the U.S. Environmental Protection Agency (EPA) for analyzing WET and ambient toxicity data. Using the TST approach, the sample is declared toxic if there is greater than or equal to a 25 percent effect in chronic tests, or if there is greater than or equal to a 20 percent effect in acute tests at the permitted instream waste concentration (IWC) (referred to as the toxic regulatory management decision (RMD)). The sample is declared non-toxic if there is less than or equal to a 10 percent effect at the IWC in acute or chronic tests (referred to as the non-toxic RMD).

**Waste**

As used in the Ocean Plan, waste includes a discharger’s total discharge, of whatever origin, i.e., gross, not net, discharge.

**Water Recycling**

The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

**ATTACHMENT B – NOTICE OF INTENT**  
**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**  
**NORTH COAST REGION**  
**NOTICE OF INTENT**  
**TO COMPLY WITH THE TERMS OF ORDER NO. R1-2020-0006 GENERAL NPDES NO. CA0024902**  
**FOR**  
**LOW THREAT DISCHARGES**  
**TO SURFACE WATERS IN THE NORTH COAST REGION**

**I. OWNER/OPERATOR**

Name:		Owner/Operator Type (Check one):	
Mailing Address:		<input type="checkbox"/> City	<input type="checkbox"/> Federal
		<input type="checkbox"/> County	<input type="checkbox"/> Special District
		<input type="checkbox"/> State	<input type="checkbox"/> Private
City:	State:	ZIP:	Phone:
Contact Person:		<input type="checkbox"/> Owner	<input type="checkbox"/> Owner/Operator
		<input type="checkbox"/> Operator	<input type="checkbox"/> Contractor
Email:		Fax:	

**II. FACILITY/SITE INFORMATION**

Name:		County:	
Street Address:		Contact Person:	
City:	State:	ZIP:	Phone:
Email:		Fax:	

**III. BILLING ADDRESS**

Send to: <input type="checkbox"/> Owner/Operator <input type="checkbox"/> Facility <input type="checkbox"/> Other (Enter information at right)	Name:		
	Mailing Address:		
	City:	State:	ZIP:

**IV. PROFESSIONAL ENGINEER**

If a professional engineer has evaluated the existing or proposed discharge and/or treatment system for compliance with this General Order, identify.			
Name:			
Mailing Address:			
City:	State:	ZIP:	Phone:
Signature:		Certificate No.:	Date:

**V. DISCHARGE INFORMATION**

<p>Provide a brief narrative description of the project generating the low threat discharge, including the purpose or reason for the project:</p>
<p>Source of discharge(s) (check all that apply). Attach a diagram of discharge water flow from the proposed project.</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Construction dewatering</li><li><input type="checkbox"/> Dredge spoils dewatering</li><li><input type="checkbox"/> Subterranean seepage dewatering</li><li><input type="checkbox"/> Geothermal well testing</li><li><input type="checkbox"/> Well installation, development, test pumping and purging</li><li><input type="checkbox"/> Maintenance of water supply wells, pipelines, tanks, etc.</li><li><input type="checkbox"/> Hydrostatic testing of water supply vessels, pipelines, tanks, etc.</li><li><input type="checkbox"/> Disinfection of water supply pipelines, tanks, reservoirs, etc.</li><li><input type="checkbox"/> Seafood rinse water discharge to ocean waters</li><li><input type="checkbox"/> Desalination brine discharge to ocean waters<sup>1</sup></li><li><input type="checkbox"/> Treated bilge water from harbor pump-out facility to ocean waters<sup>2</sup></li><li><input type="checkbox"/> Other (describe below)(Examples: Cooling tower water, condensate water)</li></ul>
<p>Fully describe and quantify vessels, pipelines, structures, and processes with which the water has contact prior to discharge to allow characterization regarding possible additives or pollutants, including chemical (e.g., chlorine or petroleum, trihalomethanes, naturally occurring metals), thermal, or physical (e.g., suspended or settleable solids) pollutants.</p>
<p>Describe the points of discharge and the upstream and downstream receiving water locations to allow an understanding of potential physical impacts such as bank erosion, stream scouring, and impacts on aquatic life.</p>

**V. DISCHARGE INFORMATION (continued)**

Field Parameters of Proposed Discharge (below):		Date of Field Parameter Test:	
Temperature _____	Dissolved Oxygen _____	Specific Conductance _____	pH _____
Proposed Start Date:		Stop Date (estimate):	
Discharge (Flow) Rate (MGD):		Estimated Total Volume:	
Will the discharge rate exceed one-percent of the receiving water flow? If so, provide an estimate of the discharge rate. This may be expressed as a range. _____		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Identify the type of discharge. <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal  If the discharge is intermittent, identify the approximate duration and frequency of the intermittent discharges.  If the discharge is seasonal, identify the months in which discharges occur.			
<p><u>Table Notes:</u></p> <ol style="list-style-type: none"> <li>Discharges of brine from desalination facilities may be eligible for coverage under this General Order provided that the brine discharge meet the applicability provision for small, portable, temporary government run facilities detailed in Section III.M.1.a of the 2015 Desalination Amendment to the California Ocean Plan.</li> <li>Discharges of treated bilge water may be eligible for coverage under this General Order provided that the harbor or marina is either certified as a Clean Marina under the Clean Marina CA program or other equivalent third party certification program, or can demonstrate that the treatment facilities remove exotic species, human wastes, hydrocarbons and other pollutants of concern.</li> </ol>			

**VI. IDENTIFICATION OF KNOWN GROUNDWATER CONTAMINATION SITES (Groundwater Projects)**

<p>If the proposed discharge involves the discharge of groundwater, the applicant must contact Regional Water Board Cleanups Unit staff to identify whether there are known groundwater contamination sites within 1/2 mile of the proposed project.</p>
<p><input type="checkbox"/> Not applicable. The proposed project does not involve the discharge of groundwater.</p>
<p><input type="checkbox"/> Applicable. The proposed project does involve the discharge of groundwater. If this box is checked, include (1) an attachment that identifies names and addresses of groundwater contamination site(s) within 1/2 mile, known pollutants, and contact name(s) at Regional Water Board and (2) demonstrate that the groundwater proposed for discharge is unaffected by the contaminated site and pumping activities will not have the inadvertent effect of capturing groundwater pollutants.</p>

**VII. POLLUTANTS/PARAMETERS OF CONCERN/DISCHARGE SAMPLING**

<p>Provide a written description characterizing the discharge and potential pollutants of concern. Attach additional pages if necessary.</p>
<p>Are additives or other chemicals added to the water to be discharged? <input type="checkbox"/> Yes (describe and quantify) <input type="checkbox"/> No</p>
<p><input type="checkbox"/> If yes, provide a list of all additives and/or chemicals (including Material Safety Data Sheets) added to the water to be discharged and the concentration and purpose of such additives and/or chemicals in the discharge.</p>
<p><input type="checkbox"/> Discharges to inland surface waters, enclosed bays and estuaries must submit:</p>
<ol style="list-style-type: none"> <li>1) The analytical results of a representative sample of the proposed effluent for pollutants listed in Attachment C, Tables C-1, C-2, and C-3 of this General Order<sup>1,2</sup>;</li> <li>2) The analytical results of a representative sample of the proposed effluent for 5-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids, settleable solids, total residual chlorine, pH, temperature, dissolved oxygen, specific conductance, hardness, turbidity, nitrate, total dissolved solids, bacteria<sup>3</sup>, and grease and oil<sup>4,5</sup>; and</li> <li>3) The analytical results of the upstream receiving water for pH, temperature, dissolved oxygen, specific conductance, hardness, turbidity, total dissolved solids, and dissolved organic carbon.</li> <li>4) The analytical results of a representative sample of the proposed effluent discharge to inland surface waters, enclosed bays, and estuaries for <i>E. coli</i> (in freshwaters) and Enterococci (in saline waters). Additionally, for all areas where shellfish may be harvested provide analytical results for total coliform.</li> </ol>
<p><input type="checkbox"/> Discharges to ocean waters must submit:</p>
<ol style="list-style-type: none"> <li>1) The analytical results of a representative sample of the proposed effluent for oil and grease, total suspended solids, settleable solids, turbidity, pH, and bacteria<sup>3</sup>; and</li> <li>2) The analytical results of a representative sample of the proposed effluent for the pollutants in Attachment C, Table C-21 of this General Order<sup>5</sup>.</li> <li>3) The analytical results of a representative sample of the proposed effluent discharged to ocean waters for fecal coliform and <i>E. coil</i>. Additionally, for all areas where shellfish may be harvested provide analytical results for total coliform.</li> </ol>
<p>Is the receiving water identified as an impaired water body under the current CWA 303(d) list<sup>6</sup>? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> If yes, list the pollutants causing the impairment and the applicable Total Maximum Daily Loads (TMDLs), and provide the results of analysis of the proposed effluent for pollutants causing or contributing the impairment.</p>
<p><input type="checkbox"/> Provide the analytical report from the laboratory.</p>

Order No. R1-2020-0006  
Low Threat Discharges to Surface Waters in the North Coast Region  
NPDES No. CAG024902

Table Notes:

1. Applicants are not required to monitor the discharge for CTR priority pollutants with no established criteria (e.g., chloroethane, 2-chloroethylvinyl ether, chloroform, methyl chloride, 2-nitrophenol, 4-nitrophenol, 3-methyl-4-chlorophenol, acenaphthylene, benzo(ghi)perylene, bis(2-chloroethoxy)methane, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, 2,6-dinitrotoluene, di-n-octyl phthalate, naphthalene, phenanthrene, and delta-BHC).
2. Applicants with low volume discharges may seek an exception to the sampling requirements contained in Attachment C by describing why specific pollutants or categories of pollutants (e.g., CTR priority pollutants) are not expected to be in the discharge and submitting justification that the existing or proposed discharge will have no significant adverse impact on water quality.
3. Monitoring for bacteria is only required for discharges that have the potential to contain pathogens, such as proposed bilge water discharges. Monitoring for bacteria in discharges to inland surface waters, enclosed bays, and estuaries shall include monitoring for *E. coli* (in freshwaters) and Enterococci (in saline waters). Monitoring for bacteria in discharges to ocean waters shall include monitoring for total coliform, fecal coliform, and Enterococci.
4. Applicants performing deicing operations related to seafood rinse processes are required to analyze the melt for copper.
5. For discharges from construction sites, bilge water facilities, hydrostatic testing, dredge spoils dewatering or other similar discharges where petroleum products and associated pollutants may be present, the NOI must also include analytical results for petroleum hydrocarbons, volatile halogenated compounds, ethylbenzene, benzene, toluene, and xylene, unless the NOI provides sufficient information to demonstrate that the discharge will not contain or come in contact with petroleum products.
6. The list of impaired surface waters can be found under the CWA Section 303(d) list at the web site: [http://www.waterboards.ca.gov/northcoast/water\\_issues/programs/tmdls/303d/](http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/)

**VIII. EVALUATION OF DISPOSAL/RECYCLING OPTIONS**

Provide an evaluation of disposal options or means for eliminating the need for discharge and justification for selecting a surface water disposal alternative. If no alternative disposal options are viable, explain why (attach additional sheet as necessary). If alternative disposal options will be combined with surface water disposal, explain details.		
Is discharge to the local municipal wastewater treatment plant a viable option? If no, include a written statement that describes why discharge to a sanitary sewer is not viable, and a written statement from the sewer authority, if the sewer authority cannot accept the discharge.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is land disposal or recycling a viable option?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is recycling (e.g., dust control, etc.) a viable option?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is it possible to eliminate or reduce the discharge volume through some other means such as conservation or engineering measures? Describe additional measures evaluated.	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**IX. DISCHARGE LOCATION(S)<sup>1</sup> AND DISCHARGE POINT(S) DESCRIPTION(S)**

Street (including address, if any):
City/County:
Nearest Cross Street(s):
Township/Range/Section T____, R____, Section____, MDB&M
Attach a map of at least 1:24000 (1" = 2000') showing the discharge site (e.g., USGS 7.5' topographic map). The map should show the treatment system, flow path, discharge point, and surface waters. Wells and residences within 1,500 feet shall be identified.
<u>Table Notes:</u>
1. Attach additional pages to provide information for multiple discharge points.

**X. RECEIVING WATER INFORMATION**

Will the proposed project discharge to: <input type="checkbox"/> Storm drain system – Enter owner’s name: _____ <input type="checkbox"/> Directly to waters of the State or U.S. (e.g., creek, river, lake, ocean) <input type="checkbox"/> Indirectly to waters of the U.S.		
Name of receiving water body: _____		
Fresh water, estuarine, or marine:	Tributary to: _____	
Estimated Receiving Water Flow (mgd or cfs):	Minimum: _____	Average: _____
Is receiving water flow continuous or intermittent? (describe): _____		
Are receiving water conditions at time of discharge anticipated to change from what is described in this NOI? <input type="checkbox"/> Yes (describe) <input type="checkbox"/> No		
Are any potable water intakes located within 500 feet of the discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Are any other point source discharges located nearby? <input type="checkbox"/> Yes (describe) <input type="checkbox"/> No		
Describe bank conditions (e.g., presence or absence of vegetation and vegetation type, bank stability, etc.): _____		
Describe instream conditions (e.g., substrate type, presence or absence of pools, etc.): _____		
Describe visual evidence or knowledge of aquatic species present: _____		
Physical water quality characteristics of receiving water:		
Date of evaluation: _____	pH: _____	Temperature: _____    Turbidity: _____
Dissolved Oxygen: _____	Specific Conductivity: _____	

**X. TREATMENT SYSTEM**

Identify type of treatment system:	<input type="checkbox"/> None	<input type="checkbox"/> Dechlorination	<input type="checkbox"/> Settling/Filtration	<input type="checkbox"/> Other (Identify)
<input type="checkbox"/> If none, describe why a treatment system is not necessary:				
<input type="checkbox"/> Provide narrative and schematic descriptions of the existing or proposed treatment system and process.				

**XI. MANAGEMENT/POLLUTION PREVENTION PLANS/ALTERNATIVE MONITORING AND REPORTING PROGRAMS**

<input type="checkbox"/> All applicants shall submit a Best Management Practices/Pollution Prevention (BMP/PP) Plan that addresses the appropriate elements identified in Attachment B-1.
<input type="checkbox"/> Applicants have the option to propose modifications to the monitoring and reporting program requirements in Attachment E for consideration by the Regional Water Board Executive Officer. If an alternative monitoring and reporting program is proposed, it shall be included with the NOI and shall describe proposed effluent and receiving water sampling locations, monitoring parameters and sampling methods, and frequency of monitoring, and provide rationale for the alternative monitoring and reporting program.

**XII. MAPS AND PHOTOGRAPHS**

<input type="checkbox"/> Attach a map(s) that shows the topography of the area extending at least one mile beyond site boundaries, site boundaries, identification of the receiving water and proposed discharge points, and the route of the discharge to the receiving water. The map should also identify the location of any known groundwater cleanup sites within 1/2 mile of the proposed project site <sup>1</sup> , if the project involves the discharge of groundwater.
<input type="checkbox"/> Attach a site drawing that identifies locations of BMPs and treatment systems and site runoff collection and conveyance systems (e.g., storm drains, ditches, etc.) through which the proposed discharge would travel.
<input type="checkbox"/> Attach representative photographs of the discharge point and the receiving water in the vicinity of the discharge point to document pre-project conditions.

**XIII. FEE REQUIREMENTS**

<input type="checkbox"/> A check payable to the State Water Resources Control Board must be submitted with this NOI. Information concerning the applicable fees can be found at <a href="http://www.waterboards.ca.gov/resources/fees/">www.waterboards.ca.gov/resources/fees/</a> . Applicants should contact the Regional Water Board for the current fee.
--

**XIV. ABILITY TO COMPLY**

Do you believe the discharge may have acute or chronic toxicity, chemical or organic constituents, sediment, total suspended solids, BOD <sub>5</sub> , bacteria, pesticides, oil and grease, radioactivity, salinity or temperature that may violate receiving water objectives of this permit or adversely impact beneficial uses of the receiving water?			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		
If your answer is no, please provide an explanation of ability to comply considering the receiving water quality, discharge water quality, and the pollutant loading to the receiving water.			
If your answer is yes, contact the Regional Water Board to discuss other discharge and/or permitting alternatives.			
<b>Professional Engineer:</b>			
Name:			
Mailing Address:			
City:	State:	ZIP:	Phone:

**XV. AGENCY CONSULTATIONS/NOTIFICATIONS (If necessary)**

Agency	Contact/Phone Number	Mitigations Required or Concerns
<input type="checkbox"/> Local Flood Control		
<input type="checkbox"/> Dept. of Fish and Wildlife		
<input type="checkbox"/> U.S. Fish and Wildlife Service		
<input type="checkbox"/> Municipal Storm Water Agency/Permittee		
<input type="checkbox"/>		

**XVI. SIGNATURE**

<p>I hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice of Intent and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the Notice of Intent, I believe that the information is true, accurate, and complete to the best of my knowledge. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.</p> <p>By signing this NOI, I agree to comply with the monitoring and reporting program and stop the discharge if there is any violation, or threatened violation, of the General Order.</p>			
Signature of Contractor/Operator:		Signature of Property Owner:	
Print or Type Name:		Print or Type Name:	
Title:	Date:	Title:	Date:

### **ATTACHMENT B-1 – BEST MANAGEMENT PRACTICES/POLLUTION PREVENTION PLAN**

All Permittees shall submit a Best Management Practices/Pollution Prevention (BMP/PP) Plan with the Notice of Intent (NOI). The BMP/PP Plan shall be consistent with the general guidance contained in U.S. EPA's *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004) and with the California Stormwater Quality Association's *Stormwater Best Management Practices Handbook for Commercial and Industrial Properties* (June 2003, or subsequent editions).

In its determination of suitability for authorization/coverage under the General Order, the Executive Officer will assess the BMP/PP Plan for its consideration of site-specific conditions and its effectiveness at pollution prevention, control, and treatment, as well as its effectiveness at preventing erosion, hydromodification, stream scouring, nuisance conditions, and other potential adverse impacts to the receiving waters. The BMP/PP Plan must include sufficient detail to allow the Executive Officer to assess whether or not all reasonable measures will be implemented to assure that the discharge poses a low threat to water quality.

At a minimum, the Permittee shall implement BMPs for all planned discharges to achieve the following performance measures:

1. Prevent aquatic toxicity using dechlorination chemical additions, implementing equivalent proven dechlorination methods, or assuring that the chlorine in the discharge dissipates naturally prior to discharge;
2. Prevent riparian erosion and hydromodification by implementing flow dissipation, erosion control, and hydromodification prevention measure; and
3. Minimize sediment discharge, turbidity, and color impacts by implementing sediment, turbidity, erosion, and color control measures.

The purpose of the BMP/PP Plan is to evaluate potential sources of pollutants from the discharge and at the project site and to identify controls that will be implemented to effectively prevent pollutant discharges to surface and ground waters. The BMP/PP Plan shall include the following elements, as applicable:

- A. Characterization of Discharges.** The BMP/PP Plan shall include a narrative assessment of all activities conducted at the site; potential pollutant sources associated with each activity; the number of discharge points, and the nature of the pollutants that could be discharged, including pollutants that could occur at the point of discharge due to stream bank erosion and stream scouring.

If the Permittee is seeking enrollment of discharges from multiple discharge points, the Permittee may request monitoring of representative discharge points in lieu of monitoring all discharge points, provided that the Permittee provides sufficient information to demonstrate that the quality of wastewater discharged at the discharge points is the same and that the selected discharge point appropriately represents the other discharge points in terms of the pollutant characterization of the discharge, the flow rate range, and receiving water characteristics.

- B. Site Map** and drawing as specified in Section XIII of NOI.
- C. Identification of BMPs.** The BMP/PP Plan shall include a narrative description of BMPs to be implemented at the site to control the discharge of pollutants and minimize impacts to water quality. The BMP/PP Plan shall also identify applicable mitigation measures from section

VII.C.3.b of the General Order to assure that the BMPs do not cause environmental impacts. Permittees shall consider:

1. Preventative BMPs - measures to reduce or eliminate the generation of pollutants and waste and undesirable nuisance conditions. The Permittee shall include measures to prevent or reduce the generation of pollutants and minimize the volume, rate of discharge and duration of discharge from the proposed discharge source and to prevent the discharge of other pollutants associated with any construction activity at the site associated with the proposed discharge.
2. The Permittee shall demonstrate that the discharge will be conducted in a manner that will prevent the creation of nuisance conditions, including, but not limited to creation of mosquito breeding habitat, flooding, nuisance algae conditions, odors, etc. For proposed discharges to dry stream beds the demonstration shall include a plan to assure that water soaks into the ground in a short period of time to preclude the creation of mosquito breeding habitat.
3. Control BMPs - measures to control or manage pollutants and waste after they are generated and before they come into contact with receiving water. The Plan shall include, if necessary, measures to retain soil and sediment on the site and to permanently stabilize any disturbed soils.
4. Treatment BMPs - measures to remove pollutants and waste from water prior to discharge (see section III.A.1 of the Fact Sheet for a discussion of wastewater treatment systems, which will not preclude coverage under the General Order), and
5. Response BMPs - measures to respond to leaks, spills, and other releases with containment, control, and cleanup measures to prevent or minimize the potential for the discharge of pollutants and to minimize the adverse effects of such discharges.

**D. BMP Measures for Low Threat Discharge Control**

1. **Discharge-Specific BMPs.** The BMP/PP shall include the following discharge-specific BMPs, if applicable.
  - a. **Treated Drinking Water Discharges.** All treated drinking water shall be dechlorinated. Filter bags or rolls, or equivalent, shall be used to remove any sand, silt or debris from entering the surface water or storm drain system. See section D.3, below, for additional information regarding BMPs for dechlorinating the discharge.
  - b. **Chlorinated Water Discharges.** All chlorinated water shall be dechlorinated at the point of discharge directly into a surface water or the point of discharge into any storm water conveyance system. Filter bags or rolls, or equivalent, shall be used to remove any sand, silt or debris from entering the surface water or storm drain system. See section D.3, below, for additional information regarding BMPs for dechlorinating the discharge.
  - c. **Distribution and Storage Tank Drainage Discharges.** All discharges from distribution system draining for cleaning and maintenance shall be dechlorinated, pH adjusted as appropriate, and filtered to remove sediment, prior to discharging to surface waters or storm drains.

- d. Dewatering and Other Sediment-Bearing Discharges.** For discharges from construction dewatering, development and test pumping of water supply wells, geothermal well testing, subterranean seepage dewatering, and dewatering of dredge spoils, multi-baffled settling tanks, or equivalent physical treatment, shall be used if necessary to remove large particles and to reduce turbidity to assure compliance with Receiving Water Limitation VI.A.7 of this General Order. When these discharges are to waterbodies that are impaired for sediment, physical treatment and BMPs shall be implemented to achieve a numeric action level (NAL) for turbidity of 20 Nephelometric Turbidity Units (NTU). If the turbidity threshold of 20 NTU is not achieved, the Permittee shall implement additional effective BMPs and treatment measures such as filtration.

## **2. Sediment, Salt, Minerals, and Erosion Control**

Indicate in the BMP/PP Plan the sediment controls that will be used to stabilize the site, as needed, to assure that sediment is not discharged. Sediment, salt, mineral, and erosion control practices shall be used to protect soil surfaces at discharge points and receiving waters.

- a. Sediment, Salt, and Mineral Control.** Sediment, salt, and mineral control practices shall be used to filter and trap sediment particles, salts and minerals to prevent them from reaching storm drains or receiving waters. The following practices may be used to control sedimentation, salt and minerals buildup in receiving waters:
  - i.** Filter barriers, such as fiber rolls/logs, silt fencing, straw bales or waddles, gravel inlet filters/bags may be placed in a flow pathway and around storm drain inlets;
  - ii.** Plastic sheets may be used to line a trench and flow pathway to prevent water contact with soil;
  - iii.** Check dams may be constructed to dissipate flow energy and minimize the potential for discharges to dislodge soil;
  - iv.** Discharge to a vegetated filter strip or swale, if available in close proximity to the discharge and that has sufficient capacity for the discharge;
  - v.** Discharge to an open vegetated field or turf to remove sand and/or silt or larger particles prior to surface water discharge;
  - vi.** Discharge to retention structures, such as ponds, trenches, sediment traps, and settling basins for settling solids;
  - vii.** Stabilization of access points using crushed rock or mulch; and
  - viii.** Good housekeeping, such as frequent sweeping.
- b. Erosion Controls.** Erosion control practices shall be used to protect soil surfaces at discharge points and receiving waters. Erosion control practices shall be used to prevent resuspension of ambient sediment within a receiving water, and shoreline erosion and streambed scour. Such controls shall minimize the energy of discharges by managing flow velocities and volumes, and shall be appropriately designed so that the discharge does not exceed the hydraulic capacity of the receiving water at the point of

discharge and areas downstream of the discharge point. The following measures may be used to control erosion:

- i.** Vegetated filter strips or swales to slow water velocity;
  - ii.** Stabilized conveyance systems;
  - iii.** Energy dissipation (structures designed to prevent erosion and slow water velocity associated with conveyance systems)
  - iv.** Construct check dams to slow down the flow;
  - v.** Diverting flows around disturbed areas or other pollutant sources using stabilized conveyances;
  - vi.** Flow controls to minimize discharge rate and to prevent erosion and flooding;
  - vii.** Install flow diffusers at discharge point;
  - viii.** Fashion discharge flow path with as little slope as possible; and
  - ix.** Decrease discharge flow rates and duration.
- 3. Dechlorination.** The following types of dechlorination methods, or equivalent, shall be utilized as appropriate to achieve a handheld meter reading of non-detect for total chlorine residual, with a meter method detection level of 0.10 mg/L or less, or a detectable concentration of a dechlorination agent:
- a. Dechlorinating Diffuser.** The dechlorinating diffuser connects directly to a discharge nozzle (e.g., to a fire hydrant or fire hose using a standard 2 ½ inch to 4 ½ inch National Pipe Thread coupling) and contains a chamber that houses dechlorination agent. Some diffusers feature a siphon for dechlorinating agent tablets or a solution to dechlorinate the water.
  - b. Dechlorination Mats.** These mats are used to facilitate effective contact between the flow and dechlorinating agent during dechlorination. For dechlorination of discharges from trenches during main breaks, the tablets are placed inside synthetic mesh fabric pockets sewn together in a grid or line. The dechlorinating mats are laid across the flow path or over the storm water conveyance system.  
  
As the discharged water flows over and around the tablets, dechlorinating agent is released, which removes the chlorine.
  - c. Broadcast Dechlorination.** Dechlorination granules are spread over an area, such as pavement, where chlorinated water is flowing toward a storm water conveyance system inlet.
  - d. Chemical Injection Metering Pump.** A dechlorination agent is injected into a discharge pipe, such as a tank drain, to dechlorinate the water before being discharged.  
  
Addition of dechlorination chemicals must be managed to assure the dechlorination agent does not adversely affect or impact beneficial uses of the receiving waters.
  - e. Natural Dissipation.** Demonstration that there is adequate distance and attenuation of chlorine to assure complete chlorine removal prior to discharge.

- 4. Management of Discharge Categories Where Petroleum Hydrocarbons and Associated Pollutants May be Present.** This General Order prohibits the discharge of detectable levels of petroleum hydrocarbons, volatile halogenated compounds, benzene, ethylbenzene, toluene, and xylene from discharge categories where these pollutants of concern are present. In order to qualify for enrollment under this General Order, construction dewatering, treated bilge water, dredge spoils dewatering, hydrostatic testing, condensate, and other similar discharges, must include BMPs to ensure that these pollutants are not discharged. BMPs include, but are not limited to, elimination of petroleum hydrocarbons, segregation of flow to prevent introduction of pollutants, and utilization of absorbents, filters and other low technology methods to remove pollutants.
- 5. Management of Additives.** A Permittee that applies additives or other chemicals must implement BMP measures to eliminate or reduce concentrations in its discharges to the extent feasible, including but not limited to the following
  - a. Recordkeeping of where, when, and how much additive is used to treat water that has the potential to be discharged to a surface water.
  - b. Implementation of BMPs that eliminate planned discharges and minimize emergency discharges to surface water bodies from occurring within 48 hours of applying additives.
  - c. Implementation of BMPs to eliminate or reduce, to the extent feasible, the use of additives by using less toxic agents or other methods in place of the additives.
- 6. Additional BMPs.** Indicate in the BMP/PP Plan what additional measures will be used to treat the discharge and prevent pollutants from impacting water quality and the environment. BMP options may include, but are not limited to:
  - a. BMPs to remove pollutants from first flush water (e.g., alternate disposal method for first flush water that may have residual chlorine or volatile organic constituents (VOCs) from drilling, welding debris, etc.);
  - b. Ponds, trenches, or basins for cooling;
  - c. Timing of discharge to eliminate or minimize impacts to receiving waters.

**E. Quality Assurance/Quality Control Protocol**

The BMP/PP Plan shall include a quality assurance and quality control protocol to assure that BMPs, monitoring, and reporting are effective, valid and in compliance with this General Order.

**F. Equipment and Supplies**

The BMP/PP Plan shall identify procedures to assure that equipment and sampling meters are inspected, maintained, and calibrated per manufacturer instructions and specifications.

**G. Training**

The BMP/PP Plan shall identify procedures to assure that the Permittee's staff and/or contractors are properly trained for project operation, project site inspections and maintenance, and monitoring and reporting, and for the proper use and maintenance, and comprehension of permit compliance needs. The Permittee shall train all personnel responsible for project

Order No. R1-2020-0006  
Low Threat Discharges to Surface Waters in the North Coast Region  
NPDES No. CAG024902

operation to assure the quality assurance and quality control protocol identified in section E, above, is properly implemented.

**ATTACHMENT C – WATER QUALITY OBJECTIVES FOR NORTH COAST REGION**

**A. Proposed Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries.** Permittees seeking authorization to discharge to inland surface waters, enclosed bays, and estuaries under this General Order shall sample and analyze the effluent, using sufficiently sensitive methods as outlined in section I.E of the MRP, for the constituents contained in Tables C-1 through C-3. The results of the analyses shall be compared to the corresponding screening levels in Tables C-1 through C-18 and shall be submitted as part of the Notice of Intent (NOI). Permittees seeking authorization to discharge to inland surface waters, enclosed bays, and estuaries are not required to monitor for CTR priority pollutants with no established water quality criteria (i.e., chloroethane, 2-chloroethylvinyl ether, chloroform, methyl chloride, 2-nitrophenol, 4-nitrophenol, 3-methyl-4-chlorophenol, acenaphthylene, benzo(ghi)perylene, bis(2-chloroethoxy)methane, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, 2,6-dinitrotoluene, di-n-octyl phthalate, naphthalene, phenanthrene, and delta-BHC).

**Table C-1. Water Quality Criteria and Screening Levels for Priority Pollutants for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

Priority Pollutant <sup>1</sup>	Units	Minimum ML <sup>2</sup>	Most Stringent Objective/Criterion	Applicable Objective/Criteria <sup>3</sup>		
				Human Health	Chronic Aquatic Life	Acute Aquatic Life
Antimony, Total Recoverable	µg/L	5.0	6	6	--	--
Arsenic, Total Recoverable	µg/L	10	10	10	150	340
Beryllium, Total Recoverable	µg/L	2.0	4	4	--	--
Cadmium, Total Recoverable	µg/L	0.25	See Table C-2 for hardness-based objectives			
Chromium (III)	µg/L	50	See Table C-2 for hardness-based objectives			
Chromium (VI)	µg/L	10	10	10	11	16
Copper, Total Recoverable	µg/L	0.5	See Table C-2 for hardness-based objectives			
Lead, Total Recoverable	µg/L	0.5	See Table C-2 for hardness-based objectives			
Mercury, Total Recoverable	µg/L	0.0005 <sup>4</sup>	0.05 <sup>5</sup>	0.05	0.77	1.4
Nickel, Total Recoverable	µg/L	1.0	See Table C-2 for hardness-based objectives			
Selenium, Total Recoverable	µg/L	5.0	5	50	5	20
Silver, Total Recoverable	µg/L	0.25	See Table C-2 for hardness-based objectives			
Thallium, Total Recoverable	µg/L	1.0	1.7	1.7	--	--
Zinc, Total Recoverable	µg/L	1.0	See Table C-2 for hardness-based objectives			

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Priority Pollutant <sup>1</sup>	Units	Minimum ML <sup>2</sup>	Most Stringent Objective/Criterion	Applicable Objective/Criteria <sup>3</sup>		
				Human Health	Chronic Aquatic Life	Acute Aquatic Life
Cyanide, Total (as CN)	µg/L	5.0	5.2	150	5.2	22
Asbestos	MFL	---	7	7	--	--
2,3,7,8-TCDD (Dioxin)	µg/L	---	1.3 x10 <sup>-8</sup>	1.3 x10 <sup>-8</sup>	0.00001	0.01
Acrolein	µg/L	5.0	320	320	--	--
Acrylonitrile	µg/L	2.0	0.059	0.059	--	7,550
Benzene	µg/L	0.5	1	1	--	--
Bromoform	µg/L	2.0	4.3	4.3	--	--
Carbon Tetrachloride	µg/L	0.5	0.25	0.25	--	--
Chlorobenzene	µg/L	2.0	70	70	--	--
Chlorodibromomethane	µg/L	0.5	0.401	0.401	--	--
Chloroethane	µg/L	2.0	--	--	--	--
2-Chloroethylvinyl Ether	µg/L	1.0	--	--	--	--
Chloroform	µg/L	2.0	80	80	1,240	--
Dichlorobromomethane	µg/L	0.5	0.56	0.56	--	--
1,1-Dichloroethane	µg/L	1.0	5	5	--	--
1,2-Dichloroethane	µg/L	0.5	0.38	0.38	20,000	--
1,1-Dichloroethylene	µg/L	0.5	0.057	0.057	--	--
1,2-Dichloropropane	µg/L	0.5	0.52	0.52	5,700	--
1,3-Dichloropropylene	µg/L	0.5	0.5	0.5	244	6,060
Ethylbenzene	µg/L	2.0	300	300	--	--
Methyl Bromide	µg/L	2.0	48	48	--	11,000
Methyl Chloride	µg/L	2.0	--	--	--	--
Methylene Chloride	µg/L	2.0	4.7	4.7	--	--
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.17	0.17	2,400	--
Tetrachloroethylene	µg/L	0.5	0.8	0.8	840	--
Toluene	µg/L	2.0	150	150	--	--
1,2-Trans-Dichloroethylene	µg/L	1.0	10	10	--	--
1,1,1-Trichloroethane	µg/L	2.0	200	200	--	18,000
1,1,2-Trichloroethane	µg/L	0.5	0.6	0.6	9,400	--
Trichloroethylene	µg/L	2.0	2.7	2.7	--	45,000

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Priority Pollutant <sup>1</sup>	Units	Minimum ML <sup>2</sup>	Most Stringent Objective/Criterion	Applicable Objective/Criteria <sup>3</sup>		
				Human Health	Chronic Aquatic Life	Acute Aquatic Life
Vinyl Chloride	µg/L	0.5	0.5	0.5	--	--
2-Chlorophenol	µg/L	5.0	120	120	--	--
2,4-Dichlorophenol	µg/L	5.0	93	93	--	--
2,4-Dimethylphenol	µg/L	2.0	540	540	--	--
2-Methyl-4,6-Dinitrophenol	µg/L	10	13	13	--	230
2,4-Dinitrophenol	µg/L	5.0	70	70	--	230
2-Nitrophenol	µg/L	10	--	--	--	--
4-Nitrophenol	µg/L	10	--	--	--	--
3-Methyl-4-Chlorophenol	µg/L	5.0	--	--	--	--
Pentachlorophenol	µg/L	1.0	0.28	0.28	23	30
Phenol	µg/L	1.0	21,000	21,000	--	--
2,4,6-Trichlorophenol	µg/L	10	2.1	2.1	--	--
Acenaphthene	µg/L	1.0	1,200	1,200	--	--
Acenaphthylene	µg/L	10	--	--	--	--
Anthracene	µg/L	10	9,600	9,600	--	--
Benzidine	µg/L	5.0	0.00012	0.00012	--	2,500
Benzo(a)Anthracene	µg/L	5.0	0.0044	0.0044	--	--
Benzo(a)Pyrene	µg/L	2.0	0.0044	0.0044	--	--
Benzo(b)Fluoranthene	µg/L	10	0.0044	0.0044	--	--
Benzo(ghi)Perylene	µg/L	5.0	--	--	--	--
Benzo(k)Fluoranthene	µg/L	2.0	0.0044	0.0044	--	--
Bis(2-Chloroethoxy) Methane	µg/L	5.0	--	--	--	--
Bis(2-Chloroethyl) Ether	µg/L	1.0	0.031	0.031	122	238,000
Bis(2-Chloroisopropyl) Ether	µg/L	10	1,400	1,400	--	--
Bis(2-Ethylhexyl) Phthalate	µg/L	5.0	1.8	1.8	--	--
4-Bromophenyl Phenyl Ether	µg/L	10	--	--	--	--
Butylbenzyl Phthalate	µg/L	10	3,000	3,000	--	--
2-Chloronaphthalene	µg/L	10	1,700	1,700	--	--
4-Chlorophenyl Phenyl Ether	µg/L	5.0	--	--	--	--
Chrysene	µg/L	5.0	0.0044	0.0044	--	--

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Priority Pollutant <sup>1</sup>	Units	Minimum ML <sup>2</sup>	Most Stringent Objective/Criterion	Applicable Objective/Criteria <sup>3</sup>		
				Human Health	Chronic Aquatic Life	Acute Aquatic Life
Dibenzo(a,h)Anthracene	µg/L	0.1	0.0044	0.0044	--	--
1,2-Dichlorobenzene	µg/L	2.0	600	600	763	--
1,3-Dichlorobenzene	µg/L	2.0	400	400	763	--
1,4-Dichlorobenzene	µg/L	2.0	5	5	763	--
3,3-Dichlorobenzidine	µg/L	5.0	0.04	0.04	--	--
Diethyl Phthalate	µg/L	10	23,000	23,000	--	--
Dimethyl Phthalate	µg/L	10	313,000	313,000	--	--
Di-n-Butyl Phthalate	µg/L	10	2,700	2,700	--	--
2,4-Dinitrotoluene	µg/L	5.0	0.11	0.11	230	330
2,6-Dinitrotoluene	µg/L	5.0	--	--	--	--
Di-n-Octyl Phthalate	µg/L	10	--	--	--	--
1,2-Diphenylhydrazine	µg/L	1.0	0.04	0.04	--	270
Fluoranthene	µg/L	10	300	300	--	--
Fluorene	µg/L	10	1,300	1,300	--	--
Hexachlorobenzene	µg/L	1.0	0.00075	0.00075	--	250
Hexachlorobutadiene	µg/L	1.0	0.44	0.44	9.3	90
Hexachlorocyclo-pentadiene	µg/L	5.0	50	50	--	--
Hexachloroethane	µg/L	1.0	1.9	1.9	540	980
Indeno(1,2,3-cd) Pyrene	µg/L	0.05	0.0044	0.0044	--	--
Isophorone	µg/L	1.0	8.4	8.4	--	117,000
Naphthalene	µg/L	10	--	--	--	--
Nitrobenzene	µg/L	10	17	17	--	27,000
N-Nitrosodimethylamine	µg/L	5.0	0.00069	0.00069	--	--
N-Nitrosodi-n-Propylamine	µg/L	5.0	0.005	0.005	--	5,850
N-Nitrosodiphenylamine	µg/L	1.0	5	5	--	5,850
Phenanthrene	µg/L	5.0	--	--	--	--
Pyrene	µg/L	10	960	960	--	--
1,2,4-Trichlorobenzene	µg/L	1.0	5	5	250	50
Aldrin	µg/L	0.005	0.00013	0.00013	--	3
alpha-BHC	µg/L	0.01	0.0039	0.0039	--	--

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Priority Pollutant <sup>1</sup>	Units	Minimum ML <sup>2</sup>	Most Stringent Objective/Criterion	Applicable Objective/Criteria <sup>3</sup>		
				Human Health	Chronic Aquatic Life	Acute Aquatic Life
beta-BHC	µg/L	0.005	0.014	0.014	--	--
gamma-BHC	µg/L	0.02	0.019	0.019	0.08	0.95
delta-BHC	µg/L	0.005	--	--	--	--
Chlordane	µg/L	0.1	0.00057	0.00057	0.0043	2.4
4,4-DDT	µg/L	0.01	0.00059	0.00059	0.001	1.1
4,4-DDE	µg/L	0.05	0.00059	0.00059	--	--
4,4-DDD	µg/L	0.05	0.00083	0.00083	--	--
Dieldrin	µg/L	0.01	0.00014	0.00014	0.056	0.24
alpha-Endosulfan	µg/L	0.02	0.056	110	0.056	0.22
beta-Endosulfan	µg/L	0.01	0.056	110	0.056	0.22
Endosulfan Sulfate	µg/L	0.05	110	110	--	--
Endrin	µg/L	0.01	0.036	0.76	0.036	0.086
Endrin Aldehyde	µg/L	0.01	0.76	0.76	--	--
Heptachlor	µg/L	0.01	0.00021	0.00021	0.0038	0.52
Heptachlor Epoxide	µg/L	0.01	0.0001	0.0001	0.0038	0.52
PCBs sum <sup>6</sup>	µg/L	0.05	0.00017	0.00017	0.014	--
Toxaphene	µg/L	0.05	0.0002	0.00073	0.0002	0.73

**Table Notes:**

- Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration). Pollutants shall be analyzed in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment E).
- ML = Minimum Levels are established in Attachment 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) and are based on the analytical method used. **The Reporting Level for each pollutant shall be less than or equal to the ML described in this table.** For parameters without a ML indicated in this table, the reported ML must be low enough to determine compliance with the most stringent Objective/criterion. See Attachment A for definitions of ML and RL.
- Dashes (--) indicate that no criteria are available.
- The analysis of total mercury shall be by U.S. EPA method 1631 (Revision E) with a reporting limit of 0.5 ng/L (0.0005 µg/L).
- Table C-3 includes water quality objectives (denoted as water column concentrations) from Part 2 of the *Water quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions* (Statewide Mercury Objectives) for the reasonable protection of people and wildlife that consume fish and apply to all inland surface waters, enclosed bays, and estuaries of the State that have the applicable beneficial uses. Mercury objectives/criterion in Table C-1 only apply to waterbodies without applicable beneficial use designations listed in Table C-3.
- PCBs sum refers to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

**Table C-2. Water Quality Criteria and Screening Levels for Hardness-dependent Metals for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

Receiving Water Hardness (mg/L CaCO <sub>3</sub> )	Most Stringent CTR Water Quality Criterion (µg/L) <sup>1</sup>						
	Cadmium	Chromium(III)	Copper	Lead	Nickel	Silver	Zinc
1 - 10	0.07	4.8	0.18	0.01	1.1	0.01	2.4
11 - 20	0.44	34	1.4	0.19	8.1	0.09	18
21 - 30	0.72	58	2.5	0.44	14	0.28	32
31 - 40	0.98	79	3.4	0.72	19	0.54	44
41 - 50	1.2	100	4.4	1.0	25	0.88	56
51 - 60	1.5	120	5.2	1.4	30	1.3	68
61 - 70	1.7	140	6.1	1.7	34	1.7	79
71 - 80	1.9	160	7.0	2.1	39	2.3	90
81 - 90	2.1	170	7.8	2.4	44	2.8	100
91 - 100	2.3	190	8.6	2.8	48	3.5	110
101 - 110	2.5	210	9.4	3.2	53	4.1	120
111 - 120	2.7	230	10	3.6	57	4.9	130
121 - 130	2.9	240	11	4.1	61	5.6	140
131 - 140	3.0	260	12	4.5	66	6.5	150
141 - 150	3.2	270	13	4.9	70	7.3	160
151 - 160	3.4	290	13	5.4	74	8.2	170
161 - 170	3.6	310	14	5.8	78	9.2	180
171 - 180	3.8	320	15	6.3	82	10	190
181 - 190	3.9	340	15	6.8	86	11	200
191 - 200	4.1	350	16	7.3	90	12	210
201 - 210	4.3	370	17	7.7	94	13	220
211 - 220	4.4	380	18	8.2	98	15	230
221 - 230	4.6	400	18	8.7	100	16	230
231 - 240	4.8	410	19	9.2	110	17	240
241 - 250	4.9	430	20	9.7	110	18	250

Receiving Water Hardness (mg/L CaCO <sub>3</sub> )	Most Stringent CTR Water Quality Criterion (µg/L) <sup>1</sup>						
	Cadmium	Chromium(III)	Copper	Lead	Nickel	Silver	Zinc
251 - 260	5.1	440	20	10	110	20	260
261 - 270	5.2	450	21	11	120	21	270
271 - 280	5.4	470	22	11	120	23	280
281 - 290	5.5	480	23	12	130	24	290
291 - 300	5.7	500	23	12	130	25	300
301 - 310	5.8	510	24	13	130	27	300
311 - 320	6.0	520	25	13	140	29	310
321 - 330	6.2	540	25	14	140	30	320
331 - 340	6.3	550	26	15	140	32	330
341 - 350	6.5	570	27	15	150	33	340
351 - 360	6.6	580	27	16	150	35	350
361 - 370	6.7	590	28	16	150	37	360
371 - 380	6.9	610	29	17	160	39	360
381 - 390	7.0	620	29	17	160	41	370
391 - 400	7.2	630	30	18	170	42	380
> 400	7.3	650	31	19	170	44	390

**Table Notes:**

1. Water quality criteria are expressed as total recoverable metal and are rounded to two significant figures.

**Table C-3. Mercury Water Quality Objectives for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries.**

Beneficial Use of the Receiving Water <sup>1</sup>	Water Body Type	Total Mercury Water Column Concentration "C" (µg/L)
COMM, CUL, WILD, MAR, RARE	Flowing water bodies (generally, rivers, creeks, streams, and waters with tidal mixing)	0.012
COMM, CUL, WILD, MAR, RARE	Slow moving water bodies <sup>2</sup> (generally, lagoons, closed estuaries, and marshes)	0.004
COMM, CUL, T-SUB, WILD, MAR, RARE	Lakes and reservoirs	Case-by-case <sup>3</sup>
T-SUB	Flowing water bodies (generally, rivers, creeks, streams, and waters with tidal mixing)	0.004

Beneficial Use of the Receiving Water <sup>1</sup>	Water Body Type	Total Mercury Water Column Concentration "C" (µg/L)
T-SUB	Slow moving water bodies <sup>2</sup> (generally, lagoons, closed estuaries, and marshes)	0.001 µg/L
SUB <sup>4</sup>	Any	Case-by-case <sup>3</sup>
<p><b>Table Notes:</b></p> <ol style="list-style-type: none"> <li>Beneficial used designations are as follows:            Commercial and Sport Fishing (COMM)            Native American Culture (CUL)            Wildlife Habitat (WILD)            Marine Habitat (MAR)            Rare, Threatened, or Endangered Species (RARE)            Tribal Subsistence Fishing (T-SUB)            Subsistence Fishing (SUB)</li> <li>Slow moving water bodies are stationary or relatively still water bodies that are expected to have higher potential to methylate mercury than flowing water bodies.</li> <li>The permitting authority shall calculate C from the water quality objective, and may use available data, including U.S. EPA's recommended national bioaccumulation factors and chemical translators.</li> <li>The water quality objective applicable to the SUB beneficial use also applies to the Subsistence Fishing (FISH) beneficial use contained in the Basin Plan.</li> </ol>		

**Table C-4. Water Quality Criteria and Screening Levels for Other Pollutants of Concern for Inland Surface Waters, Enclosed Bays, and Estuaries**

Pollutant	CAS No.	Units	ML	Applicable Objective/Criteria
Aluminum, Total Recoverable	7429905	mg/L	0.5	See Tables C-5 through C-18 for pH, hardness, and dissolved organic carbon-based objectives <sup>1</sup>
Nitrate (as N)	---	mg/L	2	10 <sup>2</sup>
Fluoride	7782414	mg/L	1.0	2.0 <sup>2</sup>
<p><b>Table Notes:</b></p> <ol style="list-style-type: none"> <li>Based on the 2018 <i>Final Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater</i>, the criteria for aluminum varies as a function of a site's pH, hardness, and dissolved organic carbon (DOC).</li> <li>Based on Primary Maximum Contaminant Levels (MCLs) established in title 22, division 4, chapter 15 of the California Code of Regulations (CCR).</li> </ol>				

**Table C-5. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 0.1 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=0.1 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>10</u>	a	<u>48</u>	b	18	d	<b>51</b>	d	<b>120</b>	b	<b>210</b>	a	<b>290</b>	a	<b>310</b>	a	<b>320</b>	a	<b>270</b>	a	<u>180</u>	a	<u>95</u>	a	<u>39</u>	a
25	<u>24</u>	a	<u>10</u>	h	32	d	<b>84</b>	d	<b>180</b>	d	<b>290</b>	a	<b>370</b>	a	<b>380</b>	a	<b>360</b>	a	<b>280</b>	a	<u>170</u>	a	<u>78</u>	a	<u>29</u>	a
50	<u>46</u>	a	<u>17</u>	d	50	d	<b>120</b>	d	<b>240</b>	d	<b>380</b>	a	<b>440</b>	a	<b>430</b>	a	<b>400</b>	a	<b>280</b>	a	<u>160</u>	a	<u>67</u>	a	<u>23</u>	a
75	<u>67</u>	b	<u>24</u>	d	64	d	<b>150</b>	d	<b>290</b>	d	<b>440</b>	b	<b>480</b>	a	<b>470</b>	a	<b>420</b>	a	<b>280</b>	a	<u>150</u>	a	<u>62</u>	a	<u>20</u>	a
100	<u>88</u>	b	<u>30</u>	d	76	d	<b>170</b>	d	<b>320</b>	d	<b>490</b>	i	<b>520</b>	a	<b>500</b>	a	<b>430</b>	a	<b>280</b>	a	<u>150</u>	a	<u>58</u>	a	<u>18</u>	a
150	<u>13</u>	c	<u>40</u>	d	96	d	<b>200</b>	d	<b>380</b>	d	<b>560</b>	h	<b>580</b>	a	<b>540</b>	a	<b>460</b>	a	<b>290</b>	a	<u>140</u>	a	<u>53</u>	a	<u>16</u>	a
200	<u>17</u>	c	<u>49</u>	d	110	d	<b>230</b>	d	<b>420</b>	d	<b>610</b>	d	<b>620</b>	a	<b>570</b>	a	<b>480</b>	a	<b>290</b>	a	<u>140</u>	a	<u>50</u>	a	<u>15</u>	a
250	<u>20</u>	d	<u>58</u>	d	130	d	<b>250</b>	d	<b>460</b>	d	<b>660</b>	d	<b>650</b>	a	<b>600</b>	a	<b>490</b>	a	<b>290</b>	a	<u>130</u>	a	<u>48</u>	a	<u>14</u>	a
300	<u>24</u>	d	<u>66</u>	d	140	d	<b>270</b>	d	<b>490</b>	d	<b>700</b>	d	<b>680</b>	a	<b>620</b>	a	<b>500</b>	a	<b>290</b>	a	<u>130</u>	a	<u>46</u>	a	<u>13</u>	a
350	<u>28</u>	d	<u>73</u>	d	150	d	<b>290</b>	d	<b>510</b>	d	<b>730</b>	d	<b>710</b>	a	<b>640</b>	a	<b>510</b>	a	<b>290</b>	a	<u>130</u>	a	<u>45</u>	a	<u>12</u>	a
400	<u>31</u>	d	<u>80</u>	d	160	d	<b>310</b>	d	<b>540</b>	d	760	d	<b>730</b>	a	<b>660</b>	a	<b>520</b>	a	<b>290</b>	a	<u>130</u>	a	<u>43</u>	a	<u>12</u>	a
430	<u>33</u>	d	<u>84</u>	d	170	d	<b>320</b>	d	<b>550</b>	d	780	d	750	a	<b>670</b>	a	<b>530</b>	a	<b>290</b>	a	<u>130</u>	a	<u>43</u>	a	<u>11</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-6. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 0.1 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=0.1 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>0.63</u>	a	<u>3.1</u>	b	12	d	<b>33</b>	e	<b>77</b>	b	130	a	180	a	200	a	<u>200</u>	a	<u>170</u>	a	<u>110</u>	a	<u>59</u>	a	<u>24</u>	a
25	<u>1.5</u>	a	<u>6.7</u>	c	19	f	<b>48</b>	f	120	d	180	a	230	a	240	a	<u>230</u>	a	<u>170</u>	a	<u>100</u>	a	<u>49</u>	a	<u>18</u>	a
50	<u>2.9</u>	a	<u>11</u>	e	26	h	<b>63</b>	g	140	e	240	b	270	a	270	a	<u>250</u>	a	<u>180</u>	a	<u>97</u>	a	<u>42</u>	a	<u>14</u>	a
75	<u>4.3</u>	b	<u>14</u>	f	31	g	<b>71</b>	g	160	f	290	b	300	a	290	a	<u>260</u>	a	<u>180</u>	a	<u>94</u>	a	<u>39</u>	a	<u>13</u>	a
100	<u>5.8</u>	b	<u>17</u>	f	35	g	<b>77</b>	g	180	f	320	c	330	a	310	a	<u>270</u>	a	<u>180</u>	a	<u>91</u>	a	<u>36</u>	a	<u>11</u>	a
150	<u>8.6</u>	c	<u>21</u>	h	42	g	87	g	190	g	370	c	360	a	340	a	<u>290</u>	a	<u>180</u>	a	<u>88</u>	a	<u>33</u>	a	<u>10</u>	a
200	<u>11</u>	c	<u>25</u>	g	47	g	94	g	200	g	400	e	390	a	360	a	<u>300</u>	a	<u>180</u>	a	<u>85</u>	a	<u>31</u>	a	<u>9.1</u>	a
250	<u>13</u>	d	<u>28</u>	g	51	g	100	g	210	g	420	e	410	a	380	a	<u>310</u>	a	<u>180</u>	a	<u>83</u>	a	<u>30</u>	a	<u>8.5</u>	a
300	<u>16</u>	e	<u>31</u>	g	55	g	100	g	220	g	430	e	430	a	390	a	<u>320</u>	a	<u>180</u>	a	<u>82</u>	a	<u>29</u>	a	<u>8.0</u>	a
350	<u>17</u>	e	<u>33</u>	g	58	g	110	g	220	g	440	e	440	a	400	a	<u>320</u>	a	<u>180</u>	a	<u>81</u>	a	<u>28</u>	a	<u>7.6</u>	a
400	<u>19</u>	e	<u>36</u>	g	61	g	110	g	230	g	450	e	460	a	410	a	<u>330</u>	a	<u>180</u>	a	<u>80</u>	a	<u>27</u>	a	<u>7.3</u>	a
430	<u>20</u>	e	<u>37</u>	g	63	g	120	g	230	g	450	e	470	a	420	a	<u>330</u>	a	<u>180</u>	a	<u>79</u>	a	<u>27</u>	a	<u>7.1</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**Table C-7. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 0.5 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=0.5 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>26</u>	a	<u>13</u>	a	46	c	<b>130</b>	d	<b>300</b>	d	550	i	770	a	820	a	<u>830</u>	a	<u>710</u>	a	<u>470</u>	a	<u>250</u>	a	<u>100</u>	a
25	<u>6.3</u>	a	<u>27</u>	a	86	d	<b>210</b>	d	<b>430</b>	d	750	d	960	a	980	a	<u>940</u>	a	<u>720</u>	a	<u>430</u>	a	<u>200</u>	a	<u>75</u>	a
50	<u>12</u>	a	<u>47</u>	b	130	d	<b>300</b>	d	<b>560</b>	d	920	d	1,100	b	1,100	a	<u>1,000</u>	a	<u>730</u>	a	<u>410</u>	a	<u>180</u>	a	<u>60</u>	a
75	<u>18</u>	a	<u>66</u>	c	170	d	<b>360</b>	d	<b>650</b>	d	1,000	d	1,300	b	1,200	a	<u>1,100</u>	a	<u>740</u>	a	<u>390</u>	a	<u>160</u>	a	<u>52</u>	a
100	<u>23</u>	a	<u>82</u>	d	210	d	<b>410</b>	d	<b>720</b>	d	1,100	d	1,400	c	1,300	a	<u>1,100</u>	a	<u>740</u>	a	<u>380</u>	a	<u>150</u>	a	<u>48</u>	a
150	<u>34</u>	a	<u>110</u>	d	260	d	<b>480</b>	d	820	d	1,200	d	1,500	d	1,400	b	<u>1,200</u>	a	<u>750</u>	a	<u>370</u>	a	<u>140</u>	a	<u>42</u>	a
200	<u>44</u>	a	<u>140</u>	d	310	d	<b>550</b>	d	890	d	1,300	d	1,600	d	1,500	b	<u>1,200</u>	a	<u>750</u>	a	<u>360</u>	a	<u>130</u>	a	<u>38</u>	a
250	<u>54</u>	a	<u>170</u>	d	350	d	<b>600</b>	d	950	d	1,400	d	1,600	d	1,600	i	<u>1,300</u>	a	<u>760</u>	a	<u>350</u>	a	<u>130</u>	a	<u>35</u>	a
300	<u>65</u>	a	<u>190</u>	d	390	d	<b>650</b>	e	1,000	e	1,500	d	1,700	d	1,600	c	<u>1,300</u>	a	<u>760</u>	a	<u>340</u>	a	<u>120</u>	a	<u>33</u>	a
350	<u>75</u>	a	<u>220</u>	d	420	d	<b>700</b>	e	1,100	e	1,500	d	1,800	d	1,700	c	<u>1,300</u>	a	<u>760</u>	a	<u>340</u>	a	<u>120</u>	a	<u>32</u>	a
400	<u>85</u>	a	<u>240</u>	d	450	d	<b>740</b>	e	1,100	e	1,500	d	1,800	d	1,700	h	<u>1,400</u>	a	<u>760</u>	a	<u>330</u>	a	<u>110</u>	a	<u>30</u>	a
430	<u>90</u>	a	<u>250</u>	d	470	d	770	e	1,100	e	1,600	d	1,800	d	1,700	d	<u>1,400</u>	a	<u>760</u>	a	<u>330</u>	a	<u>110</u>	a	<u>30</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-8. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 0.5 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=0.5 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>17</u>	a	<u>79</u>	a	31	c	78	e	180	e	370	c	480	a	510	a	<u>520</u>	a	<u>440</u>	a	<u>300</u>	a	<u>150</u>	a	<u>63</u>	a
25	<u>39</u>	a	<u>17</u>	b	52	e	110	h	230	f	470	e	600	a	620	a	<u>590</u>	a	<u>450</u>	a	<u>270</u>	a	<u>130</u>	a	<u>47</u>	a
50	<u>75</u>	a	<u>31</u>	c	74	f	140	g	270	g	520	f	740	b	710	a	<u>650</u>	a	<u>460</u>	a	<u>250</u>	a	<u>110</u>	a	<u>37</u>	a
75	<u>11</u>	a	<u>44</u>	c	89	g	160	g	290	g	560	f	840	c	770	a	<u>680</u>	a	<u>460</u>	a	<u>240</u>	a	<u>100</u>	a	<u>33</u>	a
100	<u>14</u>	a	<u>54</u>	d	100	g	170	g	300	g	580	g	910	c	820	a	<u>710</u>	a	<u>460</u>	a	<u>240</u>	a	<u>95</u>	a	<u>30</u>	a
150	<u>21</u>	a	<u>70</u>	e	120	g	190	g	320	g	600	g	970	d	910	b	<u>750</u>	a	<u>470</u>	a	<u>230</u>	a	<u>87</u>	a	<u>26</u>	a
200	<u>28</u>	a	<u>84</u>	e	130	g	200	g	340	g	610	g	990	e	990	b	<u>780</u>	a	<u>470</u>	a	<u>220</u>	a	<u>82</u>	a	<u>24</u>	a
250	<u>34</u>	a	<u>96</u>	f	150	g	220	g	350	g	610	g	1,000	e	1,000	c	<u>800</u>	a	<u>470</u>	a	<u>220</u>	a	<u>78</u>	a	<u>22</u>	a
300	<u>40</u>	a	<u>110</u>	f	160	g	230	g	360	g	620	g	1,000	e	1,100	c	<u>820</u>	a	<u>470</u>	a	<u>210</u>	a	<u>75</u>	a	<u>21</u>	a
350	<u>47</u>	a	<u>120</u>	f	170	g	240	g	370	g	620	g	1,000	e	1,100	c	<u>840</u>	a	<u>480</u>	a	<u>210</u>	a	<u>73</u>	a	<u>20</u>	a
400	<u>53</u>	a	<u>130</u>	f	180	g	250	g	370	g	630	g	1,000	f	1,100	c	<u>860</u>	a	<u>480</u>	a	<u>210</u>	a	<u>71</u>	a	<u>19</u>	a
430	<u>57</u>	a	<u>140</u>	f	180	g	250	g	380	g	630	g	1,000	f	1,100	d	<u>860</u>	a	<u>480</u>	a	<u>210</u>	a	<u>70</u>	a	<u>19</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**Table C-9. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 1.0 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=1.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>40</u>	a	<u>19</u>	a	70	c	<b>190</b>	d	430	d	810	d	1,200	a	1,200	a	<u>1,300</u>	a	<u>1,100</u>	a	<u>720</u>	a	<u>370</u>	a	<u>150</u>	a
25	<u>25</u>	a	<u>40</u>	a	130	d	<b>310</b>	d	620	d	1,100	d	1,400	c	1,500	a	<u>1,400</u>	a	<u>1,100</u>	a	<u>660</u>	a	<u>310</u>	a	<u>110</u>	a
50	<u>18</u>	a	<u>72</u>	b	210	d	<b>430</b>	d	790	d	1,300	d	1,700	d	1,700	b	<u>1,600</u>	a	<u>1,100</u>	a	<u>610</u>	a	<u>270</u>	a	<u>90</u>	a
75	<u>27</u>	a	<u>100</u>	b	260	d	<b>520</b>	d	900	d	1,400	d	1,800	d	1,800	c	<u>1,700</u>	a	<u>1,100</u>	a	<u>590</u>	a	<u>240</u>	a	<u>79</u>	a
100	<u>35</u>	a	<u>130</u>	c	320	d	<b>590</b>	d	980	d	1,500	d	1,900	d	1,900	d	<u>1,700</u>	a	<u>1,100</u>	a	<u>570</u>	a	<u>230</u>	a	<u>72</u>	a
150	<u>51</u>	a	<u>170</u>	d	400	d	<b>700</b>	d	1,100	d	1,600	d	2,100	d	2,100	d	<u>1,800</u>	a	<u>1,100</u>	a	<u>550</u>	a	<u>210</u>	a	<u>63</u>	a
200	<u>67</u>	a	<u>220</u>	d	470	d	790	d	1,200	e	1,700	d	2,200	d	2,200	d	<u>1,900</u>	b	<u>1,100</u>	a	<u>540</u>	a	<u>200</u>	a	<u>57</u>	a
250	<u>82</u>	a	<u>260</u>	d	540	d	870	e	1,300	e	1,800	d	2,200	d	2,200	d	<u>1,900</u>	b	<u>1,100</u>	a	<u>530</u>	a	<u>190</u>	a	<u>53</u>	a
300	<u>98</u>	a	<u>300</u>	d	600	d	950	e	1,400	f	1,900	d	2,300	d	2,300	d	<u>2,000</u>	b	<u>1,100</u>	a	<u>520</u>	a	<u>180</u>	a	<u>50</u>	a
350	<u>110</u>	a	<u>340</u>	d	650	d	1,000	e	1,500	f	1,900	e	2,300	d	2,300	d	<u>2,000</u>	c	<u>1,200</u>	a	<u>510</u>	a	<u>180</u>	a	<u>48</u>	a
400	<u>130</u>	a	<u>380</u>	d	700	d	1,100	f	1,600	f	2,000	e	2,400	d	2,400	d	<u>2,100</u>	c	<u>1,200</u>	a	<u>500</u>	a	<u>170</u>	a	<u>46</u>	a
430	<u>140</u>	a	<u>400</u>	d	730	d	1,100	f	1,600	f	2,000	e	2,400	d	2,400	d	<u>2,100</u>	c	<u>1,200</u>	a	<u>500</u>	a	<u>170</u>	a	<u>45</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-10. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 1.0 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=1.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>2.5</u>	a	<u>12</u>	a	47	c	110	e	240	f	500	e	730	b	770	a	<u>790</u>	a	<u>670</u>	a	<u>450</u>	a	<u>230</u>	a	<u>95</u>	a
25	<u>5.9</u>	a	<u>25</u>	a	81	e	160	g	300	g	580	f	970	c	930	a	<u>890</u>	a	<u>680</u>	a	<u>410</u>	a	<u>190</u>	a	<u>71</u>	a
50	<u>11</u>	a	<u>46</u>	b	110	f	200	g	340	g	620	g	1,100	e	1,100	c	<u>980</u>	a	<u>690</u>	a	<u>380</u>	a	<u>170</u>	a	<u>56</u>	a
75	<u>17</u>	a	<u>66</u>	b	140	h	220	g	360	g	640	g	1,100	e	1,200	c	<u>1,000</u>	a	<u>700</u>	a	<u>370</u>	a	<u>150</u>	a	<u>49</u>	a
100	<u>22</u>	a	<u>85</u>	c	160	g	240	g	380	g	650	g	1,100	f	1,300	d	<u>1,100</u>	a	<u>700</u>	a	<u>360</u>	a	<u>140</u>	a	<u>45</u>	a
150	<u>32</u>	a	<u>120</u>	d	190	g	260	g	400	g	660	g	1,100	f	1,300	e	<u>1,100</u>	a	<u>710</u>	a	<u>350</u>	a	<u>130</u>	a	<u>39</u>	a
200	<u>42</u>	a	<u>140</u>	e	210	g	290	g	420	g	670	g	1,100	g	1,300	e	<u>1,200</u>	b	<u>710</u>	a	<u>340</u>	a	<u>120</u>	a	<u>36</u>	a
250	<u>51</u>	a	<u>160</u>	e	230	g	300	g	430	g	670	g	1,100	g	1,300	f	<u>1,300</u>	b	<u>720</u>	a	<u>330</u>	a	<u>120</u>	a	<u>33</u>	a
300	<u>61</u>	a	<u>180</u>	e	250	g	320	g	440	g	680	g	1,100	g	1,300	f	<u>1,300</u>	c	<u>720</u>	a	<u>320</u>	a	<u>110</u>	a	<u>31</u>	a
350	<u>71</u>	a	<u>200</u>	e	260	g	330	g	450	i	680	g	1,100	g	1,300	f	<u>1,400</u>	c	<u>720</u>	a	<u>320</u>	a	<u>110</u>	a	<u>30</u>	a
400	<u>80</u>	a	<u>220</u>	e	280	g	340	g	470	j	680	g	1,100	g	1,300	f	<u>1,400</u>	c	<u>720</u>	a	<u>310</u>	a	<u>110</u>	a	<u>29</u>	a
430	<u>86</u>	a	<u>230</u>	f	290	g	350	i	470	j	680	g	1,100	g	1,300	f	<u>1,400</u>	c	<u>720</u>	a	<u>310</u>	a	<u>110</u>	a	<u>28</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.

2. Ranking of four most sensitive genera (Rank 1-Rank 4):

- |  |   |  |
|--|---|--|
| a Daphnia, Lampsilis, Ceriodaphnia, Hyalella | e Salmo, Daphnia, Lampsilis,            | i Salmo, Salvelinus, Daphnia, Danio    |
| b Daphnia, Lampsilis, Ceriodaphnia, Salmo    | f Salmo, Daphnia, Lampsilis, Salvelinus | j Salmo, Salvelinus, Danio, Daphnia    |
| c Daphnia, Lampsilis, Salmo, Ceriodaphnia    | g Salmo, Salvelinus, Daphnia, Lampsilis | k Salmo, Salvelinus, Danio, Pimephales |
| d Daphnia, Salmo, Lampsilis, Ceriodaphnia    | h Salmo, Daphnia, Salvelinus, Lampsilis |  |

**Table C-11. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 2.5 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=2.5 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>62</u>	a	<u>33</u>	a	120	i	<b>330</b>	d	<b>700</b>	d	1,300	d	1,900	d	2,100	c	<u>2,200</u>	a	<u>1,900</u>	a	<u>1,200</u>	a	<u>650</u>	a	<u>260</u>	a
25	<u>16</u>	a	<u>70</u>	a	230	d	<b>520</b>	d	960	d	1,600	d	2,300	d	2,500	d	<u>2,500</u>	b	<u>1,900</u>	a	<u>1,100</u>	a	<u>530</u>	a	<u>200</u>	a
50	<u>31</u>	a	<u>120</u>	a	360	d	<b>720</b>	d	1,200	d	1,800	d	2,500	d	2,700	d	<u>2,700</u>	h	<u>1,900</u>	a	<u>1,100</u>	a	<u>460</u>	a	<u>160</u>	a
75	<u>46</u>	a	<u>170</u>	a	460	d	850	d	1,300	e	2,000	d	2,700	d	2,800	d	<u>2,800</u>	d	<u>1,900</u>	a	<u>1,000</u>	a	<u>420</u>	a	<u>140</u>	a
100	<u>60</u>	a	<u>220</u>	b	550	d	970	d	1,500	e	2,100	e	2,700	d	2,900	d	<u>2,900</u>	d	<u>1,900</u>	a	<u>990</u>	a	<u>400</u>	a	<u>120</u>	a
150	<u>88</u>	a	<u>310</u>	b	710	d	1,100	d	1,700	f	2,300	e	2,900	d	3,000	d	<u>3,000</u>	d	<u>2,000</u>	a	<u>960</u>	a	<u>360</u>	a	<u>110</u>	a
200	<u>120</u>	a	<u>390</u>	c	840	d	1,300	e	1,900	g	2,500	f	2,900	d	3,100	d	<u>3,000</u>	d	<u>2,000</u>	a	<u>930</u>	a	<u>340</u>	a	<u>99</u>	a
250	<u>140</u>	a	<u>460</u>	c	960	d	1,500	e	2,100	g	2,600	g	3,000	d	3,100	d	<u>3,000</u>	d	<u>2,000</u>	a	<u>910</u>	a	<u>330</u>	a	<u>92</u>	a
300	<u>170</u>	a	<u>530</u>	d	1,100	d	1,600	f	2,200	g	2,700	g	3,000	e	3,100	d	<u>3,100</u>	d	<u>2,000</u>	a	<u>890</u>	a	<u>320</u>	a	<u>87</u>	a
350	<u>190</u>	a	<u>600</u>	d	1,200	d	1,700	f	2,300	g	2,800	g	3,100	e	3,200	d	<u>3,100</u>	d	<u>2,000</u>	a	<u>880</u>	a	<u>310</u>	a	<u>83</u>	a
400	<u>220</u>	a	<u>670</u>	d	1,200	d	1,800	f	2,400	g	2,900	g	3,100	e	3,200	d	<u>3,100</u>	d	<u>2,000</u>	a	<u>870</u>	a	<u>300</u>	a	<u>79</u>	a
430	<u>240</u>	a	<u>710</u>	d	1,300	d	1,900	g	2,400	g	2,900	g	3,100	e	3,200	d	<u>3,100</u>	d	<u>2,000</u>	a	<u>860</u>	a	<u>290</u>	a	<u>77</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-12. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 2.5 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=2.5 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>43</u>	a	<u>21</u>	a	81	c	180	f	340	g	650	g	1,200	e	1,400	c	<u>1,400</u>	a	<u>1,200</u>	a	<u>780</u>	a	<u>400</u>	a	<u>160</u>	a
25	<u>10</u>	a	<u>44</u>	a	140	e	250	g	400	g	690	g	1,200	f	1,500	e	<u>1,600</u>	b	<u>1,200</u>	a	<u>710</u>	a	<u>330</u>	a	<u>120</u>	a
50	<u>20</u>	a	<u>77</u>	a	200	f	310	g	450	g	710	g	1,200	g	1,500	f	<u>1,800</u>	c	<u>1,200</u>	a	<u>660</u>	a	<u>290</u>	a	<u>98</u>	a
75	<u>29</u>	a	<u>110</u>	a	250	f	340	g	480	g	720	g	1,200	g	1,500	g	<u>1,800</u>	e	<u>1,200</u>	a	<u>640</u>	a	<u>260</u>	a	<u>86</u>	a
100	<u>38</u>	a	<u>140</u>	b	290	g	370	g	500	g	730	g	1,200	g	1,400	g	<u>1,700</u>	e	<u>1,200</u>	a	<u>620</u>	a	<u>250</u>	a	<u>78</u>	a
150	<u>55</u>	a	<u>200</u>	b	340	g	410	g	530	i	740	g	1,100	g	1,400	g	<u>1,700</u>	f	<u>1,200</u>	a	<u>600</u>	a	<u>230</u>	a	<u>68</u>	a
200	<u>72</u>	a	<u>260</u>	c	390	g	440	g	560	j	750	j	1,100	g	1,300	g	<u>1,700</u>	f	<u>1,200</u>	a	<u>580</u>	a	<u>210</u>	a	<u>62</u>	a
250	<u>89</u>	a	<u>310</u>	c	420	g	470	g	580	j	760	j	1,100	g	1,300	g	<u>1,600</u>	f	<u>1,200</u>	a	<u>570</u>	a	<u>210</u>	a	<u>58</u>	a
300	<u>110</u>	a	<u>350</u>	d	460	g	490	i	600	j	770	j	1,100	g	1,300	g	<u>1,600</u>	h	<u>1,200</u>	a	<u>560</u>	a	<u>200</u>	a	<u>54</u>	a
350	<u>120</u>	a	<u>390</u>	e	480	g	520	i	610	j	780	j	1,100	g	1,200	g	<u>1,600</u>	g	<u>1,200</u>	a	<u>550</u>	a	<u>190</u>	a	<u>52</u>	a
400	<u>140</u>	a	<u>430</u>	e	510	g	540	j	630	j	780	j	1,000	g	1,200	g	<u>1,500</u>	g	<u>1,300</u>	b	<u>540</u>	a	<u>190</u>	a	<u>50</u>	a
430	<u>150</u>	a	<u>450</u>	e	520	g	550	j	640	j	790	j	1,000	g	1,200	g	<u>1,500</u>	g	<u>1,300</u>	b	<u>540</u>	a	<u>180</u>	a	<u>48</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**Table C-13. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 5.0 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=5.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
<b>10</b>	<u>10</u>	a	<u>50</u>	a	180	b	<b>490</b>	d	970	d	1,700	d	2,600	d	3,000	d	<u>3,300</u>	d	<u>2,800</u>	a	<u>1,900</u>	a	<u>980</u>	a	<u>400</u>	a
<b>25</b>	<u>25</u>	a	<u>110</u>	a	350	d	760	d	1,300	d	2,000	d	3,000	d	3,300	d	<u>3,500</u>	d	<u>2,900</u>	a	<u>1,700</u>	a	<u>810</u>	a	<u>300</u>	a
<b>50</b>	<u>47</u>	a	<u>190</u>	a	550	d	1,000	d	1,600	e	2,400	e	3,100	d	3,400	d	<u>3,700</u>	d	<u>2,900</u>	a	<u>1,600</u>	a	<u>700</u>	a	<u>240</u>	a
<b>75</b>	<u>69</u>	a	<u>260</u>	a	710	d	1,200	d	1,900	f	2,600	f	3,200	d	3,500	d	<u>3,700</u>	d	<u>2,900</u>	b	<u>1,500</u>	a	<u>640</u>	a	<u>210</u>	a
<b>100</b>	<u>91</u>	a	<u>330</u>	a	850	d	1,400	d	2,100	f	2,800	g	3,300	e	3,500	d	<u>3,700</u>	d	<u>2,900</u>	b	<u>1,500</u>	a	<u>600</u>	a	<u>190</u>	a
<b>150</b>	<u>130</u>	a	<u>460</u>	a	1,100	d	1,700	e	2,400	g	3,000	g	3,500	f	3,600	e	<u>3,700</u>	d	<u>2,900</u>	c	<u>1,400</u>	a	<u>550</u>	a	<u>160</u>	a
<b>200</b>	<u>170</u>	a	<u>590</u>	b	1,300	d	1,900	e	2,600	g	3,200	g	3,600	f	3,700	e	<u>3,700</u>	d	<u>2,900</u>	d	<u>1,400</u>	a	<u>520</u>	a	<u>150</u>	a
<b>250</b>	<u>210</u>	a	<u>700</u>	b	1,500	d	2,100	f	2,800	g	3,400	g	3,700	g	3,700	e	<u>3,700</u>	d	<u>2,900</u>	d	<u>1,400</u>	a	<u>500</u>	a	<u>140</u>	a
<b>300</b>	<u>260</u>	a	<u>820</u>	i	1,600	d	2,300	f	3,000	g	3,500	g	3,800	g	3,800	f	<u>3,700</u>	d	<u>2,900</u>	d	<u>1,400</u>	a	<u>480</u>	a	<u>130</u>	a
<b>350</b>	<u>290</u>	a	<u>930</u>	c	1,800	d	2,500	g	3,100	g	3,600	g	3,800	g	3,800	f	<u>3,600</u>	d	<u>2,900</u>	d	<u>1,300</u>	a	<u>460</u>	a	<u>130</u>	a
<b>400</b>	<u>330</u>	a	<u>1,000</u>	c	1,900	d	2,600	g	3,200	g	3,700	g	3,900	g	3,800	g	<u>3,600</u>	d	<u>2,900</u>	d	<u>1,300</u>	a	<u>450</u>	a	<u>120</u>	a
<b>430</b>	<u>360</u>	a	<u>1,100</u>	c	2,000	d	2,700	g	3,300	g	3,700	g	3,900	g	3,900	g	<u>3,600</u>	d	<u>2,900</u>	d	<u>1,300</u>	a	<u>440</u>	a	<u>120</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-14. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 5.0 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=5.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>65</u>	a	<u>31</u>	a	120	b	260	f	430	g	740	g	1,300	g	1,700	f	<u>2,200</u>	d	<u>1,800</u>	a	<u>1,200</u>	a	<u>610</u>	a	<u>250</u>	a
25	<u>15</u>	a	<u>66</u>	a	220	e	350	g	500	g	760	g	1,300	g	1,600	g	<u>2,000</u>	e	<u>1,800</u>	a	<u>1,100</u>	a	<u>500</u>	a	<u>190</u>	a
50	<u>30</u>	a	<u>120</u>	a	320	e	430	g	550	g	780	g	1,200	g	1,500	g	<u>1,900</u>	h	<u>1,800</u>	b	<u>1,000</u>	a	<u>440</u>	a	<u>150</u>	a
75	<u>43</u>	a	<u>160</u>	a	390	f	480	g	590	i	790	j	1,200	g	1,400	g	<u>1,800</u>	g	<u>1,900</u>	b	<u>970</u>	a	<u>400</u>	a	<u>130</u>	a
100	<u>57</u>	a	<u>210</u>	a	450	h	520	g	620	j	810	j	1,100	g	1,300	g	<u>1,700</u>	g	<u>2,000</u>	c	<u>940</u>	a	<u>380</u>	a	<u>120</u>	a
150	<u>83</u>	a	<u>290</u>	b	540	g	570	g	660	j	830	j	1,100	i	1,300	g	<u>1,600</u>	g	<u>2,000</u>	c	<u>900</u>	a	<u>350</u>	a	<u>100</u>	a
200	<u>110</u>	a	<u>380</u>	b	610	g	620	g	700	j	840	j	1,100	j	1,200	g	<u>1,500</u>	g	<u>1,900</u>	e	<u>880</u>	a	<u>330</u>	a	<u>94</u>	a
250	<u>130</u>	a	<u>470</u>	b	670	g	660	i	720	j	850	j	1,100	j	1,200	g	<u>1,500</u>	g	<u>1,800</u>	e	<u>860</u>	a	<u>310</u>	a	<u>87</u>	a
300	<u>160</u>	a	<u>550</u>	c	720	g	690	j	750	j	860	j	1,100	j	1,200	i	<u>1,400</u>	g	<u>1,800</u>	e	<u>850</u>	a	<u>300</u>	a	<u>82</u>	a
350	<u>180</u>	a	<u>620</u>	c	760	g	730	j	770	j	860	j	1,000	j	1,100	j	<u>1,400</u>	g	<u>1,700</u>	e	<u>830</u>	a	<u>290</u>	a	<u>78</u>	a
400	<u>210</u>	a	<u>690</u>	c	800	g	760	j	780	j	870	j	1,000	j	1,100	j	<u>1,300</u>	g	<u>1,700</u>	e	<u>820</u>	a	<u>280</u>	a	<u>75</u>	a
430	<u>220</u>	a	<u>730</u>	c	830	g	770	j	790	j	870	j	1,000	j	1,100	j	<u>1,300</u>	g	<u>1,700</u>	e	<u>820</u>	a	<u>280</u>	a	<u>73</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**Table C-15. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 10.0 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=10.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>16</u>	a	<u>75</u>	a	280	b	<b>720</b>	d	1,300	d	2,200	d	3,300	d	3,800	d	<u>4,400</u>	d	<u>4,300</u>	b	<u>2,800</u>	a	<u>1,500</u>	a	<u>600</u>	a
25	<u>37</u>	a	<u>160</u>	a	530	d	1,100	d	1,800	e	2,700	f	3,600	e	4,000	d	<u>4,500</u>	d	<u>4,300</u>	d	<u>2,600</u>	a	<u>1,200</u>	a	<u>450</u>	a
50	<u>72</u>	a	<u>280</u>	a	830	d	1,500	d	2,300	f	3,100	g	3,900	f	4,100	e	<u>4,400</u>	d	<u>4,200</u>	d	<u>2,400</u>	a	<u>1,100</u>	a	<u>360</u>	a
75	<u>100</u>	a	<u>400</u>	a	1,100	d	1,800	d	2,600	g	3,400	g	4,100	g	4,200	f	<u>4,300</u>	d	<u>4,100</u>	d	<u>2,300</u>	a	<u>970</u>	a	<u>310</u>	a
100	<u>140</u>	a	<u>500</u>	a	1,300	d	2,000	e	2,900	g	3,600	g	4,200	g	4,300	g	<u>4,300</u>	e	<u>4,000</u>	d	<u>2,300</u>	a	<u>910</u>	a	<u>280</u>	a
150	<u>200</u>	a	<u>700</u>	a	1,700	d	2,500	e	3,300	g	3,900	g	4,300	g	4,400	g	<u>4,300</u>	e	<u>3,900</u>	d	<u>2,200</u>	a	<u>840</u>	a	<u>250</u>	a
200	<u>260</u>	a	<u>890</u>	a	2,000	d	2,800	f	3,600	g	4,100	g	4,400	g	4,500	g	<u>4,300</u>	f	<u>3,800</u>	d	<u>2,100</u>	a	<u>790</u>	a	<u>230</u>	a
250	<u>330</u>	a	<u>1,100</u>	a	2,300	d	3,100	f	3,800	g	4,200	g	4,500	g	4,500	g	<u>4,300</u>	g	<u>3,700</u>	d	<u>2,100</u>	b	<u>750</u>	a	<u>210</u>	a
300	<u>390</u>	a	<u>1,200</u>	b	2,500	d	3,400	g	4,000	g	4,300	g	4,500	g	4,500	g	<u>4,300</u>	g	<u>3,600</u>	d	<u>2,000</u>	b	<u>720</u>	a	<u>200</u>	a
350	<u>450</u>	a	<u>1,400</u>	b	2,700	d	3,600	g	4,200	g	4,400	g	4,500	g	4,500	g	<u>4,300</u>	g	<u>3,500</u>	d	<u>2,000</u>	b	<u>700</u>	a	<u>190</u>	a
400	<u>510</u>	a	<u>1,600</u>	b	3,000	d	3,900	g	4,300	g	4,500	g	4,600	g	4,500	g	<u>4,300</u>	g	<u>3,500</u>	d	<u>2,000</u>	b	<u>680</u>	a	<u>180</u>	a
430	<u>540</u>	a	<u>1,700</u>	b	3,100	d	4,000	g	4,400	g	4,500	g	4,600	g	4,500	g	<u>4,300</u>	g	<u>3,400</u>	d	<u>2,000</u>	i	<u>670</u>	a	<u>180</u>	a

**Table Notes:**

- Bolded values indicate where the 2018 criteria are lower than the 1988 criteria magnitude within the 1988 pH range applied of 6.5-9.0.
- Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
- Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-16. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 10.0 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=10.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>29</u>	a	<u>47</u>	a	180	b	370	g	540	g	810	g	1,300	g	1,700	g	<u>2,300</u>	g	<u>2,800</u>	b	<u>1,800</u>	a	<u>930</u>	a	<u>380</u>	a
25	<u>23</u>	a	<u>100</u>	a	340	d	490	g	610	g	830	i	1,200	g	1,500	g	<u>2,000</u>	g	<u>2,800</u>	e	<u>1,600</u>	a	<u>760</u>	a	<u>280</u>	a
50	<u>45</u>	a	<u>180</u>	a	490	e	600	g	690	j	870	j	1,200	j	1,300	g	<u>1,700</u>	g	<u>2,400</u>	e	<u>1,500</u>	a	<u>660</u>	a	<u>220</u>	a
75	<u>66</u>	a	<u>250</u>	a	610	f	670	g	740	j	890	j	1,100	j	1,300	j	<u>1,600</u>	g	<u>2,300</u>	f	<u>1,500</u>	a	<u>600</u>	a	<u>200</u>	a
100	<u>86</u>	a	<u>310</u>	a	700	f	720	g	780	j	900	j	1,100	j	1,200	j	<u>1,500</u>	g	<u>2,100</u>	h	<u>1,400</u>	a	<u>570</u>	a	<u>180</u>	a
150	<u>130</u>	a	<u>440</u>	a	850	g	800	g	830	j	910	j	1,100	j	1,200	j	<u>1,400</u>	g	<u>1,900</u>	g	<u>1,400</u>	a	<u>520</u>	a	<u>160</u>	a
200	<u>160</u>	a	<u>560</u>	a	960	g	860	i	870	j	920	j	1,100	j	1,200	j	<u>1,300</u>	i	<u>1,800</u>	g	<u>1,300</u>	b	<u>490</u>	a	<u>140</u>	a
250	<u>200</u>	a	<u>670</u>	b	1,100	g	930	j	900	j	930	j	1,100	j	1,100	j	<u>1,300</u>	j	<u>1,700</u>	g	<u>1,300</u>	b	<u>470</u>	a	<u>130</u>	a
300	<u>240</u>	a	<u>800</u>	b	1,100	g	980	j	920	j	930	j	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,600</u>	g	<u>1,300</u>	b	<u>450</u>	a	<u>120</u>	a
350	<u>280</u>	a	<u>920</u>	b	1,200	g	1,000	j	950	j	950	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,500</u>	g	<u>1,300</u>	b	<u>440</u>	a	<u>120</u>	a
400	<u>320</u>	a	<u>1,000</u>	b	1,300	g	1,100	j	960	j	970	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,500</u>	g	<u>1,300</u>	c	<u>420</u>	a	<u>110</u>	a
430	<u>340</u>	a	<u>1,100</u>	b	1,300	g	1,100	j	970	j	970	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,400</u>	g	<u>1,300</u>	c	<u>420</u>	a	<u>110</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**Table C-17. Acute Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 12.0 mg/L and Various Water Total Hardness Levels and pHs**

Total Hardness	Acute Criterion (CMC) (µg/L total aluminum) (DOC=12.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>18</u>	a	<u>84</u>	a	310	b	800	d	1,500	d	2,300	e	3500	d	4,000	d	<u>4,700</u>	d	<u>4,700</u>	c	<u>3,200</u>	a	<u>1,600</u>	a	<u>670</u>	a
25	<u>42</u>	a	<u>180</u>	a	590	d	1,200	d	2,000	e	2,900	f	3,800	f	4,100	e	<u>4,700</u>	d	<u>4,600</u>	d	<u>2,900</u>	a	<u>1,400</u>	a	<u>500</u>	a
50	<u>80</u>	a	<u>320</u>	a	930	d	1,700	d	2,500	g	3,400	g	4,100	g	4,400	f	<u>4,500</u>	d	<u>4,500</u>	d	<u>2,700</u>	a	<u>1,200</u>	a	<u>400</u>	a
75	<u>120</u>	a	<u>440</u>	a	1,200	d	2,000	d	2,900	g	3,600	g	4,300	g	4,500	g	<u>4,500</u>	e	<u>4,300</u>	d	<u>2,600</u>	a	<u>1,100</u>	a	<u>350</u>	a
100	<u>150</u>	a	<u>560</u>	a	1,500	d	2,200	e	3,100	g	3,800	g	4,400	g	4,500	g	<u>4,500</u>	e	<u>4,200</u>	d	<u>2,500</u>	a	<u>1,000</u>	a	<u>320</u>	a
150	<u>220</u>	a	<u>780</u>	a	1,900	d	2,700	e	3,500	g	4,100	g	4,500	g	4,600	g	<u>4,500</u>	f	<u>4,100</u>	d	<u>2,400</u>	b	<u>930</u>	a	<u>280</u>	a
200	<u>290</u>	a	<u>990</u>	a	2,200	d	3,100	f	3,900	g	4,300	g	4,600	g	4,600	g	<u>4,500</u>	g	<u>3,900</u>	d	<u>2,400</u>	b	<u>880</u>	a	<u>250</u>	a
250	<u>360</u>	a	<u>1,200</u>	a	2,500	d	3,500	g	4,100	g	4,400	g	4,600	g	4,700	g	<u>4,500</u>	g	<u>3,800</u>	d	<u>2,300</u>	c	<u>840</u>	a	<u>240</u>	a
300	<u>430</u>	a	<u>1,400</u>	b	2,800	d	3,700	g	4,300	g	4,500	g	4,700	g	4,700	g	<u>4,500</u>	g	<u>3,700</u>	d	<u>2,300</u>	c	<u>800</u>	a	<u>220</u>	a
350	<u>500</u>	a	<u>1,600</u>	b	3,100	d	4,000	g	4,500	g	4,600	g	4,700	g	4,700	g	<u>4,500</u>	g	<u>3,600</u>	d	<u>2,200</u>	h	<u>780</u>	a	<u>210</u>	a
400	<u>560</u>	a	<u>1,800</u>	b	3,300	d	4,300	g	4,700	g	4,700	g	4,700	g	4,700	g	<u>4,400</u>	g	<u>3,500</u>	d	<u>2,200</u>	d	<u>760</u>	a	<u>200</u>	a
430	<u>600</u>	a	<u>1,900</u>	b	3,500	d	4,400	g	4,800	g	4,800	g	4,700	g	4,700	g	<u>4,400</u>	g	<u>3,500</u>	d	<u>2,200</u>	d	<u>750</u>	a	<u>200</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Ceriodaphnia, Stenocypris, Nais	d Daphnia, Micropterus, Oncorhynchus, Ceriodaphnia	g Micropterus, Oncorhynchus, Daphnia, Salmo
b Daphnia, Ceriodaphnia, Stenocypris, Micropterus	e Daphnia, Micropterus, Oncorhynchus, Salmo	h Daphnia, Micropterus, Ceriodaphnia, Oncorhynchus
c Daphnia, Micropterus, Ceriodaphnia, Stenocypris	f Micropterus, Daphnia, Oncorhynchus, Salmo	i Daphnia, Ceriodaphnia, Micropterus, Stenocypris

**Table C-18. Chronic Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater at DOC of 12.0 mg/L and Various Water Hardness Levels and pHs**

Total Hardness	Chronic Criterion (CCC) (µg/L total aluminum) (DOC=12.0 mg/L)																									
	pH 5.0		pH 5.5		pH 6.0		pH 6.5		pH 7.0		pH 7.5		pH 8.0		pH 8.2		pH 8.5		pH 9.0		pH 9.5		pH 10.0		pH 10.5	
10	<u>11</u>	a	<u>52</u>	a	200	b	410	g	570	g	820	g	1,300	g	1,600	g	<u>2,200</u>	g	<u>3,200</u>	c	<u>2,000</u>	a	<u>1,000</u>	a	<u>420</u>	a
25	<u>26</u>	a	<u>110</u>	a	390	d	540	g	650	g	860	j	1,200	g	1,400	g	<u>1,900</u>	g	<u>2,800</u>	e	<u>1,800</u>	a	<u>850</u>	a	<u>310</u>	a
50	<u>50</u>	a	<u>200</u>	a	560	e	650	g	730	j	890	j	1,200	j	1,300	j	<u>1,700</u>	g	<u>2,400</u>	f	<u>1,700</u>	a	<u>730</u>	a	<u>250</u>	a
75	<u>73</u>	a	<u>280</u>	a	680	f	730	g	780	j	910	j	1,100	j	1,300	j	<u>1,500</u>	g	<u>2,200</u>	g	<u>1,600</u>	a	<u>670</u>	a	<u>220</u>	a
100	<u>96</u>	a	<u>350</u>	a	790	f	780	g	820	j	920	j	1,100	j	1,200	j	<u>1,400</u>	g	<u>2,100</u>	g	<u>1,600</u>	a	<u>630</u>	a	<u>200</u>	a
150	<u>140</u>	a	<u>490</u>	a	950	g	870	g	880	j	940	j	1,100	j	1,200	j	<u>1,300</u>	j	<u>1,800</u>	g	<u>1,600</u>	b	<u>580</u>	a	<u>170</u>	a
200	<u>180</u>	a	<u>620</u>	a	1,100	g	950	i	920	j	940	j	1,100	j	1,100	j	<u>1,300</u>	j	<u>1,700</u>	g	<u>1,600</u>	b	<u>550</u>	a	<u>160</u>	a
250	<u>230</u>	a	<u>740</u>	a	1,200	g	1,000	j	950	j	950	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,600</u>	g	<u>1,500</u>	c	<u>520</u>	a	<u>150</u>	a
300	<u>270</u>	a	<u>880</u>	b	1,300	g	1,100	j	980	j	980	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,500</u>	g	<u>1,500</u>	c	<u>500</u>	a	<u>140</u>	a
350	<u>310</u>	a	<u>1,000</u>	b	1,400	g	1,100	j	1,000	j	990	k	1,000	j	1,100	j	<u>1,200</u>	j	<u>1,400</u>	g	<u>1,500</u>	c	<u>490</u>	a	<u>130</u>	a
400	<u>350</u>	a	<u>1,100</u>	b	1,400	g	1,200	j	1,000	j	1,000	k	1,000	k	1,000	j	<u>1,100</u>	j	<u>1,400</u>	g	<u>1,400</u>	d	<u>470</u>	a	<u>130</u>	a
430	<u>380</u>	a	<u>1,200</u>	b	1,500	g	1,200	j	1,000	j	1,000	k	1,000	k	1,000	j	<u>1,100</u>	j	<u>1,300</u>	g	<u>1,400</u>	e	<u>470</u>	a	<u>120</u>	a

**Table Notes:**

1. Italicized and underlined values are outside the pH limits of the empirical data used to generate the MLR models and should be used with caution.
2. Ranking of four most sensitive genera (Rank 1-Rank 4):
 

a Daphnia, Lampsilis, Ceriodaphnia, Hyalella	e Salmo, Daphnia, Lampsilis, Ceriodaphnia	i Salmo, Salvelinus, Daphnia, Danio
b Daphnia, Lampsilis, Ceriodaphnia, Salmo	f Salmo, Daphnia, Lampsilis, Salvelinus	j Salmo, Salvelinus, Danio, Daphnia
c Daphnia, Lampsilis, Salmo, Ceriodaphnia	g Salmo, Salvelinus, Daphnia, Lampsilis	k Salmo, Salvelinus, Danio, Pimephales
d Daphnia, Salmo, Lampsilis, Ceriodaphnia	h Salmo, Daphnia, Salvelinus, Lampsilis	

**B. Proposed Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries.** In accordance with Receiving Water Limitations VI.A.4 through VI.A.6 of this General Order, Permittees seeking authorization to discharge to inland surface waters, enclosed bays, and estuaries under this General Order shall not cause exceedances of the following water quality objectives in the downstream receiving water. pH and total dissolved solids limits in the following table shall apply as effluent limitations.

**Table C-19. Specific Water Quality Objectives for North Coast Region (from Basin Plan Table 3-1)**

Water Body <sup>1</sup>	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	Max	Min	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>
<b>Lost River HA</b>									
Clear Lake Reservoir and Upper Lost River	300	200	--	--	9.0	7.0	60	0.5	0.1
Lower Lost River	1,000	700	--	--	9.0	7.0	--	0.5	0.1
Other Streams	250	150	--	--	8.4	7.0	50	0.2	0.1
Tule Lake	1,300	900	--	--	9.0	7.0	400	--	--
Lower Klamath Lake	1,150	850	--	--	9.0	7.0	400	--	--
Groundwater <sup>4</sup>	1,100	500	--	--	8.5	7.0	250	0.3	0.2
<b>Butte Valley HA</b>									
Streams	150	100	--	--	8.5	7.0	30	0.1	0.0
Meiss Lake	2,000	1,300	--	--	9.0	7.5	100	0.3	0.1
Groundwater <sup>4</sup>	800	400	--	--	8.5	6.5	120	0.2	0.1
<b>Shasta Valley HA</b>									
Shasta River	800	600	--	--	8.5	7.0	220	1.0	0.5
Other Streams	700	400	--	--	8.5	7.0	200	0.5	0.1
Lake Shastina	300	250	--	--	8.5	7.0	120	0.4	0.2
Groundwater <sup>4</sup>	800	500	--	--	8.5	7.0	180	1.0	0.3
<b>Scott River HA</b>									
Scott River	350	250	--	--	8.5	7.0	100	0.4	0.1
Other Strams	400	275	--	--	8.5	7.0	120	0.2	0.1
Groundwater <sup>4</sup>	500	250	--	--	8.0	7.0	120	0.1	0.1
<b>Salmon River HA</b>									
All Streams	150	125	--	--	8.5	7.0	60	0.1	0.0

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Water Body <sup>1</sup>	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	Max	Min	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>
<b><i>Middle Klamath River HA</i></b>									
Klamath River above Iron Gate Dam including Iron Gate & Copco Reservoirs	425	275	--	--	8.5	7.0	60	0.3	0.2
Klamath River below Iron Gate Dam	350	275	--	--	8.5	7.0	80	0.5	0.2
Other Streams	300	150	--	--	8.5	7.0	60	0.1	0.0
Groundwater <sup>4</sup>	750	600	--	--	8.5	7.5	200	0.3	0.1
<b><i>Applegate River HA</i></b>									
All Streams	250	175	--	--	8.5	7.0	60	--	--
<b><i>Upper Trinity River HA</i></b>									
Trinity River <sup>5</sup>	200	175	--	--	8.5	7.0	80	0.1	0.0
Other Streams	200	150	--	--	8.5	7.0	60	0.0	0.0
Trinity Lake and Lewiston Reservoir	200	150	--	--	8.5	7.0	60	0.0	0.0
<b><i>Hayfork Creek</i></b>									
Hayfork Creek	400	275	--	--	8.5	7.0	150	0.2	0.1
Other Streams	300	250	--	--	8.5	7.0	125	0.0	0.0
Ewing Reservoir	250	200	--	--	8.0	6.5	150	0.1	0.0
Groundwater <sup>4</sup>	350	225	--	--	8.5	7.0	100	0.2	0.1
<b><i>S.F. Trinity River HA</i></b>									
S.F. Trinity River	275	200	--	--	8.5	7.0	100	0.2	0.0
Other Streams	250	175	--	--	8.5	7.0	100	0.0	0.0
<b><i>Lower Trinity River HA</i></b>									
Trinity River	275	200	--	--	8.5	7.0	100	0.2	0.0
Other Streams	250	200	--	--	8.5	7.0	100	0.1	0.0
Groundwater <sup>4</sup>	200	150	--	--	8.5	7.0	75	0.1	0.1
<b><i>Lower Klamath River HA</i></b>									
Klamath River	300 <sup>6</sup>	200 <sup>6</sup>	--	--	8.5	7.0	75 <sup>6</sup>	0.5 <sup>6</sup>	0.2 <sup>6</sup>
Other Streams	200 <sup>6</sup>	125 <sup>6</sup>	--	--	8.5	6.5	25 <sup>6</sup>	0.1 <sup>6</sup>	0.0 <sup>6</sup>
Groundwater <sup>4</sup>	300	225	--	--	8.5	6.5	100	0.1	0.0

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Water Body <sup>1</sup>	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	Max	Min	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>
<b>Illinois River HA</b>									
All Streams	200	125	--	--	8.5	7.0	75	0.1	0.0
<b>Winchuck River HU</b>									
All Streams	200 <sup>6</sup>	125 <sup>6</sup>	--	--	8.5	7.0	50 <sup>6</sup>	0.0 <sup>6</sup>	0.0 <sup>6</sup>
<b>Smith River HU</b>									
Smith River-Main Forks	200	125	--	--	8.5	7.0	60	0.1	0.1
Other Streams	150 <sup>6</sup>	125 <sup>6</sup>	--	--	8.5	7.0	60 <sup>6</sup>	0.1 <sup>6</sup>	0.0 <sup>6</sup>
<b>Smith River Plain HSA</b>									
Smith River	200 <sup>6</sup>	150 <sup>6</sup>	--	--	8.5	7.0	60 <sup>6</sup>	0.1 <sup>6</sup>	0.0 <sup>6</sup>
Other Streams	150 <sup>6</sup>	125 <sup>6</sup>	--	--	8.5	6.5	60 <sup>6</sup>	0.1 <sup>6</sup>	0.0 <sup>6</sup>
Lakes Earl & Talawa	--	--	--	--	8.5	6.5	--	--	--
Groundwater <sup>4</sup>	350	100	--	--	8.5	6.5	75	1.0	0.0
Crescent City Harbor	--	--	--	--	--	--	--	--	--
<b>Redwood Creek HU</b>									
Redwood Creek	220 <sup>6</sup>	125 <sup>6</sup>	115 <sup>6</sup>	75 <sup>6</sup>	8.5	6.5	--	--	--
<b>Mad River HU</b>									
Mad River	300 <sup>6</sup>	150 <sup>6</sup>	160 <sup>6</sup>	90 <sup>6</sup>	8.5	6.5	--	--	--
<b>Eureka Plain HU</b>									
Humboldt Bay	--	--	--	--	8.5	7	--	--	--
<b>Eel River HU</b>									
Eel River	375 <sup>6</sup>	225 <sup>6</sup>	275 <sup>6</sup>	140 <sup>6</sup>	8.5	6.5	--	--	--
Van Duzen River	375	175	200	100	8.5	6.5	--	--	--
South Fork Eel River	350	200	200	120	8.5	6.5	--	--	--
Middle Fork Eel River	450	200	230	130	8.5	6.5	--	--	--
Outlet Creek	400	200	230	125	8.5	6.5	--	--	--
<b>Cape Mendocino HU</b>									
Bear River	390 <sup>6</sup>	255 <sup>6</sup>	240 <sup>6</sup>	150 <sup>6</sup>	8.5	6.5	--	--	--
Mattole River	300 <sup>6</sup>	170 <sup>6</sup>	170 <sup>6</sup>	105 <sup>6</sup>	8.5	6.5	--	--	--

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

Water Body <sup>1</sup>	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>	Max	Min	50% Upper Limit <sup>3</sup>	90% Upper Limit <sup>2</sup>	50% Upper Limit <sup>3</sup>
<b><i>Mendocino Coast HU</i></b>									
Ten Mile River	--	--	--	--	8.5	6.5	--	--	--
Noyo River	185 <sup>6</sup>	150 <sup>6</sup>	120 <sup>6</sup>	105 <sup>6</sup>	8.5	6.5	--	--	--
Jug Handle Creek	--	--	--	--	8.5	6.5	--	--	--
Big River	300 <sup>6</sup>	195 <sup>6</sup>	190 <sup>6</sup>	130 <sup>6</sup>	8.5	6.5	--	--	--
Albion River	--	--	--	--	8.5	6.5	--	--	--
Navarro River	285 <sup>6</sup>	250 <sup>6</sup>	170 <sup>6</sup>	150 <sup>6</sup>	8.5	6.5	--	--	--
Garcia River	--	--	--	--	8.5	6.5	--	--	--
Gualala River	--	--	--	--	8.5	6.5	--	--	--
<b><i>Russian River HU</i></b>									
(upstream) <sup>8</sup>	320	250	170	150	8.5	6.5	--	--	--
(downstream) <sup>9</sup>	375 <sup>6</sup>	285 <sup>6</sup>	200 <sup>6</sup>	170 <sup>6</sup>	8.5	6.5	--	--	--
Laguna de Santa Rosa	--	--	--	--	8.5	6.5	--	--	--
Bodega Bay	--	--	--	--	8.5	7	--	--	--
Coastal Waters <sup>10</sup>	--	--	--	--	11	11	--	--	--
<b>Table Notes:</b> 1. Water bodies are grouped by hydrologic unit (HU), hydrologic area (HA), or hydrologic subarea (HAS). 2. 90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit. 3. 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit. 4. Value may vary depending on the aquifer being sampled. This value is the result of sampling over time, and as pumped, from more than one aquifer. 5. Daily Average Not to Exceed      Period                      River Reach 60°F                                      July 1–Sept. 14              Lewiston Dam to Douglas City Bridge 56°F                                      Sept. 15–Oct. 1              Lewiston Dam to Douglas City Bridge 56°F                                      Oct. 1–Dec. 31              Lewiston Dam to confluence of North Fork Trinity River 6. Does not apply to estuarine areas. 7. pH shall not be depressed below natural background levels. 8. Russian River (upstream) refers to the mainstem river upstream of its confluence with Laguna de Santa Rosa. 9. Russian River (downstream) refers to the mainstem river downstream of its confluence with Laguna de Santa Rosa. 10. The State’s Ocean Plan applies to all North Coast Region coastal waters. 11. pH shall not be changed at any time more than 0.2 units from that which occurs naturally. 12. Dashes (--) indicate that no water body specific objectives are available.									

**Table C-20. Site-Specific Objectives (SSOs) for Dissolved Oxygen for the Mainstem Klamath River<sup>1</sup>**

Location <sup>2</sup>	Percent DO Saturation Based on Natural Receiving Water Temperatures <sup>3</sup>	Time Period
Stateline to the Scott River	85%	April 1 through September 30
	90%	October 1 through March 31
Scott River to Hoopa	90%	Year round
Scott River to Upstream Hoopa-California boundary	85%	June 1 through August 31
	90%	September 1 through May 31
Upper and Middle Estuary	80%	August 1 through August 31
	85%	September 1 through October 31 and June 1 through July 31
	90%	November 1 through May 31
Lower Estuary	For the protection of estuarine habitat (EST), the dissolved oxygen content of the lower estuary shall not be depressed to levels adversely affecting beneficial uses as a result of controllable water quality factors.	
<p><b>Table Notes:</b></p> <ol style="list-style-type: none"> <li>States may establish site specific objectives equal to natural background (U.S. EPA, 1986. Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-033; U.S. EPA Memo from Tudor T. Davies, Director of Office of Science and Technology, U.S. EPA Washington, D.C. dated November 5, 1997). For aquatic life uses, where the natural background condition for a specific parameter is documented, by definition that condition is sufficient to support the level of aquatic life expected to occur naturally at the site absent any interference by humans (Davies, 1997). These DO objectives are derived from the T1BSR run of the Klamath TMDL model and described in Tetra Tech, December 23, 2009 <i>Modeling Scenarios: Klamath River Model for TMDL Development</i>. They represent natural DO background conditions due only to non-anthropogenic sources and a natural flow regime.</li> <li>These objectives apply to the maximum extent allowed by law. To the extent that the State lacks jurisdiction, the Site-Specific Dissolved Oxygen Objectives for the Mainstem Klamath River are extended as a recommendation to the applicable regulatory authority.</li> <li>Corresponding DO concentrations are calculated as daily minima, based on site-specific barometric pressure, site-specific salinity, and natural receiving water temperatures as estimated by the T1BSR run of the Klamath TMDL model and described in Tetra Tech, December 23, 2009. <i>Modeling Scenarios: Klamath River Model for TMDL Development</i>. The estimates of natural receiving water temperatures used in these calculations may be updated as new data or method(s) become available. After opportunity for public comment, any update or improvements to the estimate of natural receiving water temperature must be reviewed and approved by the Executive Officer before being used for this purpose.</li> </ol>		

**C. Proposed Discharges to Ocean Waters.** Permittees seeking authorization to discharge to ocean waters under this General Order shall sample and analyze the effluent, using sufficiently sensitive methods as outlined in section I.E of the MRP, for the constituents contained in Table C-21. The results of the analyses shall be compared to the corresponding screening level and shall be submitted as part of the NOI.

**Table C-21. Water Quality Criteria and Screening Levels for the Ocean Plan Table 1 Pollutants**

<b>Table 1 Pollutant</b>	<b>CAS No.</b>	<b>ML<sup>1</sup> (µg/L)</b>	<b>WQ Criterion<sup>2</sup> (µg/L)</b>
Arsenic	7440382	1.0	8.0
Cadmium	7440439	0.2	1.0
Chromium(IV)	18540299	5.0	2.0
Copper	7440508	0.5	3.0
Lead	7439921	2.0	2.0
Mercury	7439976	0.2	0.04
Nickel	7440020	1.0	5.0
Selenium	7782492	1.0	15
Silver	7440224	0.2	0.7
Zinc	7440666	1.0	20
Cyanide	57125	5.0	1.0
Ammonia	--	200	600
Non-Chlorinated Phenolics	--	10	30
Chlorinated Phenolics	--	1	1.0
Endosulfans <sup>3</sup>	--	0.01	0.009
Endrin	72208	0.01	0.002
HCH <sup>4</sup>	58899	0.02	0.004
Acrolein	107028	2.0	220
Antimony	7440360	0.5	1,200
Bis (2-chloroethoxy) methane	111911	5.0	4.4
Bis (2-chloroisopropyl) ether	39638329	2.0	1,200
Chlorobenzene	108907	0.5	570
Chromium (trivalent)	7440473	--	190,000
Di-n-butyl phthalate	84742	10	3,500
Dichlorobenzenes <sup>5</sup>	--	0.5	5,100
Diethyl phthalate	84662	2.0	33,000
Dimethyl phthalate	131113	2.0	820,000
4,6-dinitro-2-methylphenol	534521	5.0	220
2,4-dinitrophenol	51285	5.0	4.0
Ethylbenzene	100414	0.5	4,100

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

<b>Table 1 Pollutant</b>	<b>CAS No.</b>	<b>ML<sup>1</sup> (µg/L)</b>	<b>WQ Criterion<sup>2</sup> (µg/L)</b>
Fluoranthene	206440	0.05	15
Hexachlorocyclopentadiene	77474	5.0	58
Nitrobenzene	98953	1.0	4.9
Thallium	7440280	1.0	2.0
Toluene	108883	0.5	85,000
1,1,1-trichloroethane	71556	0.5	540,000
Tributyltin	688733	--	0.0014
Acrylonitrile	107131	2.0	0.10
Aldrin	309002	0.005	0.000022
Benzene	71432	0.5	5.9
Benzidine	92875	5.0	0.000069
Beryllium	7440417	0.5	0.033
Bis (2-chloroethyl) ether	111444	1.0	0.045
Bis (2-ethylhexyl) phthalate	117817	5.0	3.5
Carbon tetrachloride	56235	0.5	0.90
Chlordane <sup>6</sup>	57749	0.1	0.000023
Chlorodibromomethane	124481	0.5	8.6
Chloroform	67663	0.5	130
DDT <sup>7</sup>	50293	0.01	0.00017
1,4-dichlorobenzene	106467	2.0	18
3,3-dichlorobenzidine	91941	5.0	0.0081
1,2-dichloroethane	107062	0.5	28
1,1-dichloroethylene	75354	0.5	0.9
Dichlorobromomethane	75274	0.5	6.2
Dichloromethane	75092	0.5	450
1,3-dichloropropene	542756	0.5	8.9
Dieldrin	60571	0.01	0.00004
2,4-dinitrotoluene	121142	5.0	2.6
1,2-diphenylhydrazine	122667	1.0	0.16
Halomethanes <sup>8</sup>	--	--	130
Heptachlor	76448	0.01	0.00005
Heptachlor epoxide	1024573	0.01	0.00002

Order No. R1-2020-0006  
 Low Threat Discharges to Surface Waters in the North Coast Region  
 NPDES No. CAG024902

<b>Table 1 Pollutant</b>	<b>CAS No.</b>	<b>ML<sup>1</sup> (µg/L)</b>	<b>WQ Criterion<sup>2</sup> (µg/L)</b>
Hexachlorobezene	118741	1.0	0.00021
Hexachlorobutadiene	87683	1.0	14
Hexachloroethane	67721	1.0	2.5
Isophorone	78591	1.0	730
N-nitrosodimethylamine	62759	5.0	7.3
N-nitrosodi-N-propylamine	621647	5.0	0.38
N-nitrosodiphenylamine	86306	1.0	2.5
PAHs <sup>9</sup>	--	--	0.0088
PCBs <sup>10</sup>	--	--	0.000019
TCDD equivalents <sup>11</sup>	--	--	0.0000000039
1,1,2,2-tetrachloroethane	79345	0.5	2.3
Tetrachloroethylene	127184	0.5	2.0
Toxaphene	8001352	0.5	0.00021
Trichloroethylene	79016	0.5	27
1,1,2-trichloroethane	79005	0.5	9.4
2,4,6-trichlorophenol	88062	10	0.29
Vinyl chloride	75014	0.5	36

**Table Notes:**

1. ML = Minimum Level, established by the Water Quality Control Plan for Ocean Waters of California (Ocean Plan). The ML is the concentration in a sample that is equivalent to the concentration in the lowest calibration standard analyzed for a specific analytical procedure, assuming that all method specified sample weights, volumes, and processing steps have been followed. The Reporting Level for each pollutant shall be less than or equal to the ML described in this table.
2. The listed water quality criterion is the most stringent criterion of those established by the Ocean Plan. Dashes (--) indicate that no criteria are available.
3. Endosulfans shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.
4. HCH shall mean the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.
5. Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.
6. Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordane-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.
7. DDT shall mean the sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.
8. Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).
9. PAHs shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
10. PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
11. TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Table 1 Pollutant	CAS No.	ML <sup>1</sup> (µg/L)	WQ Criterion <sup>2</sup> (µg/L)
<b>Isomer Group</b>	<b>Toxicity Equivalence Factor</b>		
2,3,7,8-tetra CDD			
2,3,7,8-penta CDD			
2,3,7,8-hexa CDDs			
2,3,7,8-hepta CDD			
octa CDD			
2,3,7,8 tetra CDF			
1,2,3,7,8 penta CDF			
2,3,4,7,8 penta CDF			
2,3,7,8 hexa CDFs			
2,3,7,8 hepta CDFs			
octa CDF			

## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Permittee must comply with all of the 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, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 130001, 13304, 13350, 13385)
2. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA 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. § 122.41(a)(1))

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Permittee 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 General Order. (40 C.F.R. § 122.41(c))

#### **C. Duty to Mitigate**

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this General Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d))

#### **D. Proper Operation and Maintenance**

The Permittee 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 Permittee to achieve compliance with the conditions of this General Order. Proper operation and maintenance also includes 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 Permittee only when necessary to achieve compliance with the conditions of this General Order. (40 C.F.R. § 122.41(e))

#### **E. Property Rights**

3. This General Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g))
4. The issuance of this General Order does not authorize any injury to persons or property or invasion of other rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c))

#### **F. Inspection and Entry**

The Permittee shall allow the Regional 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. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this General Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this General Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 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 General Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring General Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 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. § 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. § 122.41(m)(1)(ii))
2. **Bypass not exceeding limitations.** The Permittee 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. § 122.41(m)(2).)
3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 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. § 122.41(m)(4)(i)(B)); and

- c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C))
  4. **Burden of Proof.** In any enforcement proceeding, the permittee seeking to establish the bypass defense has the burden of proof.
  5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii))
  6. **Notice**
    - a. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit a prior notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i))
    - b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii))

#### 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 Permittee. 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. § 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. § 122.41(n)(2))
2. **Conditions necessary for a demonstration of upset.** A Permittee 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. § 122.41(n)(3)):
  - a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The Facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv))
3. **Burden of Proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4))

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

Enrollment under this General Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee 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. § 122.41(f))

### B. Duty to Reapply

If the Permittee chooses to continue a discharge regulated by this General Order after the expiration date of this General Order and after the Regional Water Board has reissued this General Order, the Permittee must apply for and obtain new permit coverage as required by the new Order. (40 C.F.R. § 122.41(b))

### C. Transfers

This General Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the General Order or Notice of Applicability to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 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. § 122.41(j)(1))

B. Monitoring must be conducted according to test procedures under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is “sufficiently sensitive” when:

1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and, either the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility’s discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. 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.

In the case of pollutants 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. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv))

In the case of sludge use or disposal approved under 40 C.F.R. part 136, monitoring must be conducted according to test procedures in part 503 unless otherwise specified in 40 C.F.R. or other test procedures have been specified in this Order.

#### **IV. STANDARD PROVISIONS – RECORDS**

- A.** Except for records of monitoring information required by this Order related to the Permittee'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 Permittee 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 General Order, and records of all data used to complete the application and the NOI for this General 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 Regional Water Board Executive Officer at any time. (40 C.F.R. § 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. § 122.41(j)(3)(i));
  2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
  3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
  4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
  5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
  6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi))
- C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):**
1. The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and
  2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2))

#### **V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

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

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional 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, and V.B.5 below. (40 C.F.R. § 122.41(k))

- 2.** 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. § 122.22(a)(1))
- 3.** For a partnership or sole proprietorship, a general partner or the proprietor shall sign all permit applications. (40 C.F.R. § 122.22(a)(2))
- 4.** For a municipality, state, federal, or other public agency, a principal executive officer or ranking elected official shall sign all permit applications. 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. § 122.22(a)(3))
- 5.** All reports required by this Order and other information requested by the Regional 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. § 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. § 122.22(b)(2)); and
  - c.** The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3))
- 6.** 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 Regional 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. § 122.22(c))

7. 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. § 122.22(d))

8. Any person providing the electronic signature for documents described in Standard Provisions – 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 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 § 122.22(e))

**C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this General Order. (40 C.F.R. § 122.41(l)(4))
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring, sludge use, or disposal practices. As of December 21, 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, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i))
3. If the Permittee monitors any pollutant more frequently than required by this General 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. chapter 1, 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 Regional Water Board. (40 C.F.R. § 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. § 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. § 122.41(l)(5))

**E. Twenty-Four Hour Reporting**

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided

within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission 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.  
(40 C.F.R. § 122.41(l)(6)(i))

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order.  
(40 C.F.R. § 122.41(l)(6)(ii)(A))
  - b. Any upset that exceeds any effluent limitation in this Order.  
(40 C.F.R. § 122.41(l)(6)(ii)(B))
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.  
(40 C.F.R. § 122.41(l)(6)(iii))

**F. Planned Changes**

The Permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the Facility. Notice is required under this provision only when (40 C.F.R. § 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. § 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. § 122.41(l)(1)(ii))
3. The alteration or addition results in a significant change in the Permittee'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. § 122.41(l)(1)(iii))

**G. Anticipated Noncompliance**

The Permittee shall give advance notice to the Regional Water Board of any planned changes in the Facility or activity that may result in noncompliance with this General Order's requirements.  
(40 C.F.R. § 122.41(l)(2))

**H. Other Noncompliance**

The Permittee 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 –

Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7))

**I. Other Information**

When the Permittee 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 Regional Water Board, State Water Board, or U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 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 initial recipient 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. § 122.41(l)(9))

**VI. STANDARD PROVISIONS – ENFORCEMENT**

The Regional 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 Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 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 General Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter (µg/L) (40 C.F.R. § 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. § 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. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 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 General Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

- b.** 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 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. § 122.42(a)(2)(iii)); or
- d.** The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

**Contents**

I. General Monitoring Provisions.....E-2  
 II. Monitoring Locations.....E-4  
 III. Effluent Monitoring Requirements .....E-4  
 A. Monitoring Locations EFF-001, EFF-002, etc.....E-4  
 IV. Whole Effluent Toxicity Testing Requirements – Not Applicable .....E-6  
 V. Receiving Water Monitoring Requirements – Surface water and Groundwater .....E-7  
 A. Monitoring Locations RSW-001 and RSW-002 – Applicable to Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries.....E-7  
 B. Groundwater Monitoring – Not Required .....E-7  
 VI. Other Monitoring Requirements.....E-7  
 A. Visual Monitoring (Monitoring Locations EFF-001, EFF-002, etc., RSW-001, and RSW-002) .....E-7  
 B. Other Monitoring (Monitoring Locations EFF-001, EFF-002, etc., RSW-001, and RSW-002) .....E-8  
 VII. Reporting Requirements .....E-8  
 A. General Monitoring and Reporting Requirements .....E-8  
 B. Self-Monitoring Reports (SMRs) .....E-8  
 C. Other Reports .....E-11  
 D. Spill Notification.....E-12

**Tables**

Table E-1. Monitoring Station Locations .....E-4  
 Table E-2. Effluent Monitoring – Monitoring Locations EFF-001, EFF-002, etc.....E-4  
 Table E-3. Discharge Monitoring Frequencies .....E-6  
 Table E-4. Receiving Water Monitoring – Monitoring Locations RSW-001 and RSW-002.....E-7  
 Table E-5. Monitoring Periods and Reporting Schedule .....E-9

## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (Water Code) section 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

Permittees regulated under General NPDES Permit No. CAG0024902 shall be subject to the following monitoring and reporting requirements unless such requirements are modified or waived by the Regional Water Board Executive Officer. The Executive Officer may modify the monitoring and reporting program for a specific Permittee to reduce monitoring frequency and/or eliminate a monitoring parameter if it can be demonstrated that any reduction in monitoring requirements will not compromise water quality. In addition, the Executive Officer may stipulate conditions and requirements in addition to those established by the MRP for all authorized discharges, including monitoring and reporting requirements, for each specific discharge to assess compliance with requirements of the General Order and/or characterize the discharge and/or receiving water quality. Any deviations from this standard MRP that are proposed by the Executive Officer will be identified in the NOA letter from the Executive Officer to the Permittee.

### I. GENERAL MONITORING PROVISIONS

- A. Representative Monitoring Provision.** 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 in Table E-1, below, and further described in the Permittee’s Notice of Intent (NOI) and Executive Officer’s Notice of Authorization (NOA), 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 Regional Water Board.

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 point and in such manner to assure a representative sample of the discharge.

- B. Supplemental Monitoring Provision.** If the Permittee monitors any pollutant more frequently than required by this General Order, using test procedures approved by 40 C.F.R. part 136 or as specified in this General Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.
- C. Data Quality Assurance Provision.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) in accordance with the provisions of Water Code section 13176 and must include quality assurance/quality control data with their analytical reports. The Permittee may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) with field equipment or its on-site laboratory provided that the Permittee has standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results.

The Permittee shall keep a manual onsite containing the steps followed in this program and must demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.

- D. Instrumentation and Calibration Provision.** All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one-year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E. Minimum Levels (ML) and Analytical Method Selection.** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, Guidelines Establishing Test Procedures for Analysis of Pollutants. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). A U.S. EPA-approved analytical method is sufficiently sensitive where:
1. The ML is at or below both the level of the applicable water quality criterion/objective and the permit limitation for the measured pollutant or pollutant parameter; or
  2. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
  3. The method has the lowest ML of the U.S. EPA-approved analytical methods where none of the U.S. EPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation.

Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) and toxics listed in Table 1 of the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (2018) (Ocean Plan)* shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005) (SIP)* and the Ocean Plan, respectively. However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the SIP. For instance, U.S. EPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

**II. MONITORING LOCATIONS**

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this General Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001 <sup>1</sup>	Wastewater to be discharged, following treatment and before contact with receiving water and before dilution by any other water or waste.
002	EFF-002	If more than one discharge point is authorized under the General Order, compliance monitoring locations shall be named EFF-002, EFF-003, etc., and shall be located to allow collection of wastewater to be discharged, following treatment and before contact with receiving water and before dilution by any other water or waste.
--	RSW-001	Receiving water immediately upstream of the point of discharge at a location unaffected by the discharge to allow collection of water samples or observation of conditions that are representative of upstream, background conditions within the receiving water. Applicable to inland surface waters, enclosed bays, and estuaries.
--	RSW-002	Receiving water at an appropriate monitoring location approved by the Executive Officer, downstream of the point of discharge, that represents downstream water quality after mixing of the discharge and receiving water. This monitoring location must be located within 25 feet of the discharge outfall unless otherwise approved by the Regional Water Board. Applicable to inland surface waters, enclosed bays, and estuaries.

Table Notes:

1. Permittees enrolled under this General Order for more than one discharge point must comply with effluent limitations and monitoring requirements at each discharge point. If the Permittee is seeking enrollment of discharges from multiple discharge points, the Permittee may request monitoring of representative discharge points in lieu of monitoring all discharge points, provided that the Permittee provides sufficient information to demonstrate that the quality of wastewater discharged at the discharge points is the same and that the selected discharge point appropriately represents the other discharge points in terms of the pollutant characterization of the discharge, the flow rate range, and receiving water characteristics.

**III. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Locations EFF-001, EFF-002, etc.**

1. The Permittee shall monitor the effluent at Monitoring Location EFF-001 (EFF-002, etc. if there is more than one discharge point) as follows:

**Table E-2. Effluent Monitoring – Monitoring Locations EFF-001, EFF-002, etc.**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow <sup>1</sup>	MGD	Meter/Estimate	Daily <sup>2</sup>	---
Total Suspended Solids (TSS)	mg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Settleable Solids	mL/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Total Dissolved Solids	mg/L	Grab	Monthly <sup>5</sup>	Part 136 <sup>4</sup>

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Grease and Oil	mg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Petroleum Hydrocarbons <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Volatile Halogenated Compounds <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Ethylbenzene <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Benzene <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Toluene <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Xylene <sup>6</sup>	µg/L	Grab	Monthly <sup>3</sup>	Part 136 <sup>4</sup>
Fecal Coliform Bacteria <sup>7</sup>	MPN/100 mL	Grab	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>
Enterococci <sup>7</sup>	cfu/100 mL	Grab	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>
<i>E. coli</i> <sup>7</sup>	cfu/100 mL	Grab	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>
Total Coliform Bacteria <sup>7</sup>	MPN/100 mL	Grab	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>
pH	standard units	Field	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>
Temperature	°C or °F	Field <sup>8</sup>	See Table E-3 <sup>8,9</sup>	Part 136 <sup>4</sup>
Dissolved Oxygen	mg/L	Field <sup>8</sup>	See Table E-3 <sup>8,9</sup>	Part 136 <sup>4</sup>
Turbidity	NTU	Grab or Field	See Table E-3 <sup>8,10</sup>	Part 136 <sup>4</sup>
Chlorine, Total Residual <sup>11</sup>	mg/L	Field	See Table E-3 <sup>8</sup>	Part 136 <sup>4,12</sup>
Specific Conductance (@ 25°C)	µmhos/cm	Grab or Field	See Table E-3 <sup>8</sup>	Part 136 <sup>4</sup>

**Table Notes:**

- The Permittee shall monitor the flow rate and calculate the average daily flow rate of the discharge during the entire period of discharge. The flow rate, duration, and total volume of the discharge shall be monitored and reported. Flow estimates are acceptable provided that the basis for the estimates is clearly indicated in the monitoring reports.
- This flow sampling frequency assumes steady state flow. Flow rate shall be monitored more frequently if flow rate changes. Continuous flow monitoring is desirable if flow rates change frequently.
- Monthly monitoring requirements apply to discharges of greater than one month in duration.
- Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration).
- Monthly monitoring requirements apply to discharges of greater than one month in duration to water bodies with WQOs for total dissolved solids identified in Table 3-1 of the Basin Plan (Table C-19 of Attachment C).
- Monitoring for petroleum hydrocarbons, volatile halogenated compounds, ethylbenzene, benzene, toluene, and xylene is required for all construction, bilge water and similar discharges where these are pollutants of concern. The requirement for on-going monthly monitoring may be waived if the first monthly sample shows that these pollutants are not present and with documentation that no construction equipment or petroleum hydrocarbons are on the site.
- Monitoring for fecal coliform bacteria, Enterococci, and total coliform bacteria is required for discharges to ocean waters. Monitoring for *E. coli* and enterococci is required for discharges to inland surface waters, enclosed bays, and estuaries.
- Monitoring for this parameter shall be performed in accordance with the frequencies listed in Table E-3.
- If the discharge has the potential for causing in-stream temperature or dissolved oxygen impacts, the Executive Officer may require continuous monitoring.
- The Executive Officer may require more frequent turbidity monitoring for construction dewatering, well development and other similar projects to demonstrate that treatment measures and BMPs are removing sediment.
- Total chlorine residual monitoring shall be required when the water being discharged originates from a chlorinated water source or has otherwise been chlorinated. Total chlorine residual monitoring is not required of non-chlorinated discharges.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
12. Total chlorine residual shall be monitored with a method sensitive to and accurate at a minimum level of 0.1 mg/L.				

**Table E-3. Discharge Monitoring Frequencies**

Duration of Discharge	Sampling Requirements <sup>1,2,3</sup>
Less than 20 minutes	One sample is required during the first 10 minutes of the discharge.
20 minutes to 24 hours	One sample is required during the first 10 minutes of the discharge, plus a second sample is required within the last 10 minutes of the discharge.
24 hours to 7 days	Daily samples are required for the duration of the discharge.
7 days to 30 days	Daily samples are required for the first week of the discharge. Two samples per week are required thereafter.
Greater than 30 days	Daily samples are required for the first week of the discharge. Two samples per week are required for the next three weeks of the discharge. Weekly samples are required thereafter.

**Table Notes:**

- If the discharge is intermittent rather than continuous, the Permittee shall collect samples according to the frequencies in Table E-3 for each intermittent discharge event.
- If any effluent sample or measurement collected does not comply with any effluent limitation identified in section V of the Order, the Permittee shall collect additional measurements (if the non-compliant parameter is for a field parameter such as pH) and/or resample for the non-compliant parameter within 24 hours of receiving a report from an analytical laboratory. If these additional samples and/or measurements confirm that the effluent does not comply with an effluent limitation, the Permittee shall cease the discharge and contact Regional Water Board staff to discuss a plan to achieve compliance with the non-compliant effluent limitation. The Permittee shall modify treatment and/or BMPs before restarting the discharge. After a shut-down, the Permittee shall sample at least twice during the first hour of discharge. The Permittee shall contact Regional Water Board staff within 24 hours by telephone or email if compliance is not achieved.
- If any receiving water measurement collected during the first hour of discharge does not comply with any receiving water limitation identified in section VI of the Order, the Permittee shall cease the discharge and contact Regional Water Board staff to discuss a plan to achieve compliance with the non-compliant receiving water limitation. The Permittee shall modify treatment and/or BMPs to achieve compliance with the non-compliant receiving water limitation before restarting the discharge. After a shut-down, the Permittee shall sample at least twice during the first hour of discharge. If compliance is not achieved, the Permittee shall cease discharge and contact Regional Water Board staff within 24 hours by telephone or email.

- The Permittee shall take photographs at Discharge Points 001, 002, etc., at the commencement of the discharge, and according to the frequencies in Table E-3, thereafter. The photographs shall be labeled with a date and time and shall be included with monitoring reports submitted to the Regional Water Board.

**IV. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS – NOT APPLICABLE**

This Order does not require discharges to be monitored for whole effluent toxicity.

**V. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

**A. Monitoring Locations RSW-001 and RSW-002 – Applicable to Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

- For discharges to inland surface waters, enclosed bays, and estuaries, the Permittee shall monitor the receiving water at Monitoring Locations RSW-001 and RSW-002, during periods of discharge, as follows:

**Table E-4. Receiving Water Monitoring – Monitoring Locations RSW-001 and RSW-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow <sup>1</sup>	MGD	Meter	Daily <sup>2</sup>	--
pH	standard units	Field	See Table E-3 <sup>3</sup>	Part 136 <sup>4</sup>
Temperature	°C or °F	Field	See Table E-3 <sup>3</sup>	Part 136 <sup>4</sup>
Dissolved Oxygen	mg/L	Field	See Table E-3 <sup>3</sup>	Part 136 <sup>4</sup>
Turbidity	NTU	Grab or Field	See Table E-3 <sup>3</sup>	Part 136 <sup>4</sup>
Specific Conductance (@ 25°C)	µmhos/cm	Grab or Field	See Table E-3 <sup>3</sup>	Part 136 <sup>4</sup>

**Table Notes:**

- The Permittee shall monitor the flow rate and calculate the average daily flow rate of the discharge during the entire period of discharge. The flow rate, duration, and total volume of the discharge shall be monitored and reported. Flow estimates are acceptable provided that the basis for the estimates is clearly indicated in the monitoring reports.
- This flow sampling frequency assumes steady state flow. Flow rate shall be monitored more frequently if flow rate changes. Continuous flow monitoring is desirable if flow rates change frequently.
- Monitoring for this parameter shall be performed in accordance with the frequencies listed in Table E-3.
- Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration).

**B. Groundwater Monitoring – Not Required**

This General Order does not require groundwater monitoring at this time.

**VI. OTHER MONITORING REQUIREMENTS**

**A. Visual Monitoring (Monitoring Locations EFF-001, EFF-002, etc., RSW-001, and RSW-002)**

- Visual observations of the discharge (Monitoring Locations EFF-001, EFF-002, etc.) and the receiving water (Monitoring Locations RSW-001 and RSW-002) shall be recorded daily during discharge. Visual monitoring of the effluent shall include, but not be limited to, observations for color, turbidity, floating or suspended matter or debris. Visual observations for the receiving water shall include, but not be limited to observations for the occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc. Visual observations shall be recorded and included in the Permittee’s monitoring reports submitted to the Regional Board. Visual monitoring frequency may be reduced to less than daily upon demonstration by the Permittee that the discharge does not have any adverse impacts on the receiving water and that receiving water conditions do not vary on a daily basis.

The Permittee shall take photographs of the receiving water at Monitoring Locations RSW-001 and RSW-002 prior to commencement of discharge and, when discharging, one

time per week at a time of peak discharge. The photographs shall be labeled with a date and time and shall be included with monitoring reports submitted to the Regional Water Board.

**B. Other Monitoring (Monitoring Locations EFF-001, EFF-002, etc., RSW-001, and RSW-002)**

1. When granting authorization to discharge under the General Order, the Executive Officer may stipulate conditions in addition to the requirements described by the General Order for all authorized discharges, including monitoring requirements, for a specific discharge. Such monitoring requirements shall become enforceable requirements of the General Order and may include effluent and/or receiving water monitoring requirements.
  - a. When the discharge originates from groundwater with naturally occurring metals concentrations, monitoring the discharge for the metals of concern may be required.
  - b. When the discharge originates from a potable supply, monitoring the discharge for trihalomethanes, including chloroform, chlorodibromomethane, dichlorobromomethane, and bromoform, may be required.
  - c. When stream scouring or bank erosion is a concern, for example, monitoring for suspended solids in receiving water, upstream and downstream of the point of discharge, may be required.
  - d. Low threat discharges that continue for more than one year may be required to monitor for any toxic pollutants for which water quality criteria or objectives have been established for the receiving stream. For example, this additional monitoring requirement may be applied to any discharge for which pre-project sampling revealed levels of any toxic pollutant that was below the applicable water quality criteria. This additional monitoring requirement may be stipulated in the authorization letter or may be requested at a later date if Regional Water Board staff determines that this requirement is necessary to assure water quality protection. Monitoring for the toxic pollutants will provide on-going characterization of authorized discharges and assurance that toxic pollutants are not present in the concentrations that exceed applicable water quality criteria and objectives.

**VII. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

**B. Self-Monitoring Reports (SMRs)**

1. The Permittee shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.

2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IV. The Permittee 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 Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-5. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Discharge initiation date	All	<p><b>For discharges four weeks or less in duration:</b> A single monitoring report shall be submitted within 30 days of ceasing the discharge</p> <p><b>For discharges greater than four weeks in duration:</b> Monthly reports shall be submitted by the first day of the second calendar month following the monitoring period</p>
Daily	Discharge initiation date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling <sup>1</sup>	
Twice per Week	Discharge initiation date	Each full week following the discharge initiation date for discharges less than one month in duration  Sunday through Saturday for discharges greater than one month in duration	
Weekly	Discharge initiation date	Each full week following the discharge initiation date for discharges less than one month in duration  Sunday through Saturday for discharges greater than one month in duration	
Monthly	Discharge initiation date	First day of calendar month through last day of calendar month  For discharges less than one month in duration, but spanning two months, the monitoring period shall be the discharge period	

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Quarterly	Discharge initiation date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	
Table Notes 1. See Table E-3 for monitoring periods of discharges less than 24 hours in duration.			

**5. Reporting Protocols.** The Permittee shall report with each sample result the applicable ML, the RL, and the current MDL, as determined by the procedure in 40 C.F.R. part 136.

The Permittee 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 reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the reported ML, 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 as well as the words “Estimated Concentration” (may be shortened to “Est. Conc.”). 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 ( $\pm$  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. The Permittee is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 6.** The Permittee shall submit SMRs in accordance with the following requirements:
- a. The Permittee 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. The reported data shall include calculations of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is 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 Permittee shall electronically submit the data in a tabular format as an attachment.
  - b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

- i. Facility name and address;
  - ii. WDID number;
  - iii. Applicable period of monitoring and reporting;
  - iv. Any variations from the Notice of Intent (NOI);
  - v. A brief evaluation of the effectiveness of all treatment methods and/or management measures implemented;
  - vi. Whether the discharge resulted in observable changes or impacts in the receiving water, including, but not limited to, discoloration or turbidity and an explanation of upstream and downstream conditions identified in the receiving water monitoring required by section IV.A of this Monitoring and Reporting Program;
  - vii. Identification and explanation of any complaints caused by the discharge;
  - viii. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);
  - ix. Corrective actions taken or planned; and
  - x. The proposed time schedule for corrective actions.
- e. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>).

In the event that an alternate method for submittal of SMRs is required, the Permittee shall submit the SMR electronically via e-mail to [NorthCoast@waterboards.ca.gov](mailto:NorthCoast@waterboards.ca.gov) or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://waterboards.ca.gov/northcoast>.

### C. Other Reports

1. **Notice of Start Up.** The Permittee shall notify the appropriate Regional Water Board staff person by telephone or email at least three (3) days before initiating an authorized discharge, unless a shorter notification period is authorized by the Executive Officer.
2. **Notice of Termination.** Using the Notice of Termination (NOT) form provided as Attachment G to this General Order, within 30 days following permanent termination of an authorized discharge, Permittees shall provide notice that the authorized discharge has been completed.

**D. Spill Notification**

- 1. Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges that may endanger health or the environment shall be provided orally to the Regional Water Board<sup>1</sup> within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with section V.E of Attachment D.
  - a.** Information to be provided verbally to the Regional Water Board includes:
    - a.** Name and contact information of caller;
    - b.** Date, time, and location of spill or unauthorized discharge occurrence;
    - c.** Estimates of spill or unauthorized discharge volume, rate of flow, and spill duration, if available and reasonably accurate;
    - d.** Surface water bodies impacted, if any;
    - e.** Cause of spill or unauthorized discharge, if known at the time of the notification;
    - f.** Cleanup actions taken or repairs made at the time of the notification; and
    - g.** Responding agencies.

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<sup>1</sup> The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor's Office of Emergency Services Warning Center (CalOES) will satisfy the 24-hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

**ATTACHMENT F – FACT SHEET**

**Contents**

I.	Permit Information.....	F-3
II.	Notification Requirements .....	F-3
	A. General Order Application .....	F-3
III.	Purpose of Order and Eligibility Requirements.....	F-10
	A. Description of Low Threat Discharges and Existing Discharge Requirements .....	F-10
	B. Discharge Points and Receiving Waters.....	F-15
IV.	Applicable Plans, Policies, and Regulations.....	F-16
	A. Legal Authorities.....	F-16
	B. California Environmental Quality Act (CEQA).....	F-17
	C. State and Federal Laws, Regulations, Policies, and Plans .....	F-17
	D. Impaired Water Bodies on CWA 303(d) List.....	F-21
	E. Other Plans, Policies, and Regulations.....	F-22
V.	Rationale For Effluent Limitations and Discharge Specifications .....	F-23
	A. Discharge Prohibitions .....	F-23
	B. Technology-Based Effluent Limitations .....	F-26
	C. Water Quality-Based Effluent Limitations (WQBELs).....	F-28
	D. Final Effluent Limitation Considerations.....	F-33
	E. Land Discharge Specifications.....	F-36
	F. Water Recycling Specifications .....	F-36
VI.	Rationale for Receiving Water Limitations.....	F-37
	A. Surface Water – Inland Waters, Enclosed Bays, and Estuaries.....	F-37
	B. Surface Water – Ocean Waters.....	F-37
	C. Groundwater.....	F-38
VII.	Rationale for Provisions .....	F-38
	A. Standard Provisions .....	F-38
	B. Monitoring and Reporting Program (MRP) Requirements.....	F-39
	C. Special Provisions.....	F-39
VIII.	Rationale for Monitoring and Reporting Requirements .....	F-44
	A. Effluent Monitoring.....	F-45
	B. Whole Effluent Toxicity Testing Requirements – Not Applicable .....	F-45
	C. Receiving Water Monitoring .....	F-45
	D. Other Monitoring Requirements.....	F-46
IX.	Public Participation .....	F-46
	A. Notification of Interested Parties.....	F-46
	B. Written Comments.....	F-47
	C. Public Hearing.....	F-47
	D. Waste Discharge Requirements Petitions .....	F-47
	E. Information and Copying.....	F-47
	F. Register of Interested Persons .....	F-48
	G. Additional Information.....	F-48

**Tables**

Table F-1. Pollutants of Concern by Discharge Type .....F-12  
Table F-2. Historic Effluent Limitations for Discharges to Inland Surface Waters, Enclosed Bays, and  
Estuaries .....F-15  
Table F-3. Historic Effluent Limitations for Discharges to Ocean Waters .....F-16  
Table F-4. Basin Plan Beneficial Uses.....F-18  
Table F-5. Ocean Plan Beneficial Uses .....F-19  
Table F-6. Pollutants of Concern and Reasonably Foreseeable Treatment/Management Measures by  
Discharge Type .....F-41

## ATTACHMENT F – FACT SHEET

As described in section III.B of this General Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this General Order. This Fact Sheet includes 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.

### I. PERMIT INFORMATION

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act or CWA) 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. Section IV.A of this Fact Sheet includes specific information regarding legal authorities.

The purpose of this General Order is to regulate discharges to surface waters of the North Coast Region, including inland and ocean waters, which are low threat in nature as defined in the Basin Plan and section I.A of this General Order. Individuals, public agencies, private businesses, and other legal entities that apply for coverage under this General Order and that are issued a Notice of Applicability (NOA) are hereinafter referred to as “Permittees.” For the purposes of this General Order, references to the “Permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

Permittees may obtain coverage under this General Order by submitting a complete Notice of Intent (NOI) as described in section II of this General Order and further described in section II of this Fact Sheet. Permittees who submit a complete NOI under this General Order are not required to submit an individual permit application. The Regional Water Board may request additional information and determine that a Permittee is not eligible for coverage under this General Order and would be better regulated under an individual or other general NPDES permit, or, for discharge to land under Waste Discharge Requirements (WDRs) or a waiver of WDRs. If the Regional Water Board issues an NPDES permit or WDRs for a discharge that is otherwise covered by this General Order, the applicability of this General Order to the specified discharge is immediately terminated on the effective date of the NPDES permit or WDRs.

Permittees of low threat discharges that are already covered under General Order No. R1-2015-0003, are automatically covered under this General Order, provided that the discharge is in compliance with all permit requirements. The Executive Officer will provide a Notice of Applicability (NOA) letter to existing Permittees (those covered under Order No. R1-2015-0003) that coverage under the General Order will continue.

### II. NOTIFICATION REQUIREMENTS

#### A. General Order Application

The NOI, as shown in Attachment B, is intended to provide the Regional Water Board with information necessary for a determination of suitability for coverage under this General Order. The information required to be completed in the NOI in Attachment B meets the requirements for NOIs established at 40 C.F.R. section 122.28(b)(2) and satisfies the requirements for a report of

waste discharge (ROWD) established by Water Code section 13260. Water Code section 13260 requires a ROWD to start the application process for all WDRs and NPDES permits, except for general WDRs or general NPDES permits that use the NOI to comply or specify the use of an alternative application form designed for the permit. Submittal of the NOI is intended to replace the requirement of discharges to provide State of California Form 200 and U.S. EPA Application Forms 1 and 2B. The requirement to provide a single application form represents a less burdensome procedure for applicants and the Regional Water Board, while requiring submittal of all necessary information pursuant to NPDES regulations at 40 C.F.R. section 122.28(b)(2) and Water Code section 13260.

Applicants enrolling for coverage under this General Order must submit a complete NOI at least 90 days in advance of the proposed project start date. The 90 days may be decreased at the discretion of the Executive Officer. New discharges will not be authorized until a complete NOI has been submitted to the Regional Water Board and the Executive Officer has issued a Notice of Applicability (NOA) for coverage under this General Order. Permittees covered under Order No. R1-2015-0003 are automatically covered under this General Order, provided that the NOI submitted under Order No. R1-2015-0003 adequately characterizes the discharge and the discharge is compliant with all terms of this General Order.

The NOI, as detailed in Attachment B, requires submittal of the following information and data:

- 1. General Information.** General information about the applicant and the applicant's representatives (e.g., contractors, professional engineer).
- 2. Discharge Information.** Information about the existing or proposed discharge, including, but not limited to, a narrative project description describing the project generating the low threat discharge; the source of the discharge; whether the discharge is eligible for coverage under the State Water Board's Water Quality Order 2014-0194-DWQ, General Permit No. CAG140001, *Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Surface Waters* (hereinafter referred to as the Drinking Water General Permit); description of vessels, pipelines, structures, and processes with which the water has contact prior to discharge; description of the points of discharge and upstream and downstream receiving water locations; field parameter testing for temperature, dissolved oxygen, specific conductance, and pH; discharge flow rate and volume; whether the discharge will exceed one percent of the receiving water flow; and whether the discharges are continuous, intermittent, and/or seasonal.
- 3. Identification of Known Groundwater Contamination Sites.** If the proposed discharge involves the discharge of groundwater, the applicant must contact Regional Water Board Cleanups Division staff to identify whether there are known groundwater contamination sites within ½ mile of the proposed project. The applicant will need to demonstrate that the proposed discharge is not currently impacted due to nearby groundwater contamination and that pumping of groundwater will not cause contaminants from nearby contaminated sites to be drawn to the proposed project site and inadvertently discharged.
- 4. Pollutants of Concern/Discharge Sampling.** Applicants with discharges to inland surface waters, enclosed bays, or estuaries applying for coverage under this General Order are required to analyze the proposed discharge for constituents regulated under the California Toxics Rule (CTR) (listed in Attachment C, Tables C-1, C-2, and C-3) and 5-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), settleable solids, total residual

chlorine, pH, temperature, dissolved oxygen, specific conductance, hardness, turbidity, nitrate, and total dissolved solids, and grease and oil and submit the results with the NOI.

The screening levels for the constituents in Attachment C, Tables C-1 and C-2, are based on the most restrictive water quality objectives/criteria from the CTR and primary maximum contaminant levels (MCLs) from Title 22 of the California Code of Regulations (CCR). The screening levels for mercury in Table C-3 are based on the statewide mercury objectives in *Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions*. The screening levels for nitrate and fluoride in Table C-4 are based on Primary MCLs, and the screening levels for aluminum in Tables C-5 through C-18 are based on the 2018 Final Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater.

In addition to these monitoring requirements, applicants discharging wastes that have the potential to contain pathogens, such as proposed bilge water discharges, are required to analyze the discharge for total coliform bacteria, *E. coli*, and enterococci bacteria consistent with statewide bacteria objectives for discharges to inland surface waters, enclosed bays, and estuaries found in *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*. Applicants performing deicing operations related to seafood rinse processes are required to analyze the melt for copper to document that the ice is not a source of copper at concentrations that could cause an exceedance of Ocean Plan objectives for copper.

Applicants with discharges to ocean waters are required to analyze the proposed discharge for constituents regulated under the Ocean Plan (listed in Attachment C, Table C-21) and oil and grease, TSS, settleable solids, turbidity, and pH, and submit the results with the NOI.

In addition to these monitoring requirements, applicants discharging wastes that have the potential to contain pathogens, such as proposed bilge water discharges, are required to analyze the discharge for total coliform bacteria, fecal coliform bacteria, and enterococci bacteria consistent with statewide bacteria objectives for discharges to ocean waters.

Applicants with proposed discharges from construction sites, bilge water facilities, hydrostatic testing, dredge spoils, dewatering or other similar discharges where petroleum products and associated pollutants may be present, must also submit analytical results for petroleum hydrocarbons, volatile halogenated compounds, ethylbenzene, benzene, toluene, and xylene, unless the NOI provides sufficient information to demonstrate that the discharge will not contain or come in contact with petroleum products.

The most restrictive criteria are necessary because this General Order is intended as a general order and covers low threat discharges to all surface waters in the North Coast Region of California. If the analytical test results of the discharge show that any constituent concentrations exceed the water quality screening levels listed in Attachment C, then the discharge will not be allowed under this General Order with the exception that discharges from drinking water systems associated with activities mandated by federal and state regulations. If the analytical test results of the discharge show that all constituent concentrations are below the screening levels in Attachment C, then the discharge may be enrolled under this General Order, with the exception that discharge categories where petroleum hydrocarbons and associated pollutants (volatile halogenated compounds,

ethylbenzene, benzene, toluene, and xylene) may be present must demonstrate that appropriate BMPs are implemented to ensure that there will be no detectable levels of such pollutants in order to be enrolled under this General Order.

Section 1.3, Step 8 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) reads, in part, “*The RWQCB shall require periodic monitoring (at least once prior to the issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established; however, the RWQCB may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from this monitoring requirement.*” Certain types of low volume discharges may qualify for an exception to the sampling requirements contained in Attachment C, provided the applicant can sufficiently justify that the discharge will have no significant adverse impact on water quality. Applicants seeking an exception to the sampling requirements contained in Attachment C must submit justification as part of the NOI. If the Regional Water Board finds that the justification is not sufficient to grant an exception to the sampling requirements, the applicant will be required to analyze the existing or proposed discharge for all constituents regulated under the CTR, as listed in Attachment C, and submit the analytical test results.

As further discussed in section IV.C.6 of this Fact Sheet, the State Water Board through Resolution 2014-0067 adopted on November 18, 2014, allows water purveyors an exception to comply with priority pollutant criteria for the priority pollutants that have an applicable CTR criterion more stringent than the corresponding MCL, or do not have an adopted pollutant-specific MCL. The exception is limited to drinking water system discharges only and does not apply to discharges where the drinking water discharge is commingled with storm water, construction groundwater, or any other discharge.

If an applicant discharges or proposes to discharge into a water quality limited segment (WQLS), the applicant must sample the discharge for the constituents causing the impairment in the receiving water under the current 303(d) list and submit the result with the NOI. The list of WQLSs can be found under the CWA section 303(d) List at the web site: [http://www.waterboards.ca.gov/northcoast/water\\_issues/programs/tmdls/303d/](http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/). If the analytical data demonstrate that constituent concentrations in the discharge will cause or substantially contribute to the impairment of the receiving water, the discharge will not be authorized under this General Order.

5. **Evaluation of Disposal/Reuse 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 Regional Water Board encourages, wherever practicable, water conservation and/or recycling of wastewater. Therefore, to obtain coverage under this General Order, applicants are required to evaluate recycling and/or alternative disposal options that could be used for all or part of the low threat discharge. These options include, but are not limited to:
  - 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. Applicants may submit any denial or restrictive flow letter from the WWTP as proof that this option is not viable for all or

part of the proposed discharge or explain why it is infeasible to discharge to the WWTP.

- b. Land Recycling/Disposal.** Each applicant must evaluate all reasonable recycling and disposal options, including, but not limited to irrigation of nearby urban or agricultural land or use for dust control. Recycling generally refers to application of the water to land at agronomic rates of existing vegetation, while land disposal involves application of water at greater than agronomic rates of existing vegetation or discharge to infiltration basins in a manner that may allow the discharge to reach groundwater. The land recycling/disposal option is usually restricted to the dry season (May through October) unless the applicant can demonstrate that the discharge can be retained on land during the wet season (November through April).

If a land recycling/disposal is not proposed, the applicant must fully explain why land recycling/disposal is not a viable option.

- c. Water Conservation.** The applicant must evaluate whether there are any viable options to reduce the discharge volume through water conservation measures.
- 6. Discharge Location and Discharge Point Description.** The applicant must include information on the discharge location and attach a map showing the discharge site. The map should show the treatment system, flow path, discharge point, and surface waters. Wells and residences within 1,500 feet shall also be identified on the map.
- 7. Receiving Water Information.** The applicant shall provide information on the receiving water, including, but not limited to, name of receiving water, receiving water flow, bank and instream conditions, and basic receiving water quality data.

The receiving water characterization is an important element of the evaluation. Even if the proposed discharge contains no pollutants of concern, the discharge must be conducted in a manner that protects beneficial uses. For example, if a stream will be dry at the time of a proposed discharge, the applicant must be able to demonstrate that the discharge will not cause erosion or disrupt the life cycle of amphibians or other aquatic life that depend on the non-flowing conditions for part of their life cycle. If a low flow stream has pools that are populated with salmonids or other aquatic life, the applicant would need to demonstrate that a short-term, high flow rate discharge will not disrupt or harm the aquatic life.

- 8. Treatment System.** Though treatment of the effluent is not required by this General Order, continuous compliance with the requirements of this General Order is required and may depend on some form of treatment being provided prior to discharge. It is anticipated that many Permittees will need to implement simple, low technology treatment measures such as dechlorination, sediment removal (sedimentation tanks or filters), and/or pH adjustments. Each applicant must demonstrate that the treatment is adequate to remove or reduce pollutants to levels that will not impact water quality.

The Permittee shall implement treatment control BMPs to protect water quality as follows:

- a. Chlorine Residual.** Chlorine is added to potable water and other potentially low threat discharges for disinfection purposes. Chlorine is toxic to aquatic organisms. Therefore, all chlorinated discharges must be dechlorinated prior to discharge to protect the

beneficial uses of the receiving water. The Permittee must achieve strict levels that assure that there is no chlorine discharged to the receiving water.

- b. Settleable and Suspended Solids.** Sediment, algae and other solids may be present in the discharges at levels that could cause violation of the Basin Plan's narrative objectives for sediment, settleable material and suspended material. High flow rates may cause stream bank erosion and the discharge of a large amount of sediment downstream of the discharge. This General Order requires the development of a site-specific Best Management Practices/Pollution Prevention (BMP/PP) Plan to avoid and/or minimize these impacts.

The applicant must demonstrate that the discharge will not exceed the TSS and settleable solids effluent limitations contained in the General Order and further demonstrate that the proposed discharge will not cause an exceedance of turbidity receiving water limitations.

- c. pH.** Lime or sodium hydroxide is added to water to adjust water pH for corrosion protection in water conveyance systems. The discharge of water with high pH content may adversely impact aquatic organisms. The discharges shall have a balanced pH in order to prevent detrimental responses to aquatic organisms.

If there is any doubt about the ability to continuously comply with the requirements of this General Order, the applicant shall contact a professional engineer to assure that the effluent is properly treated prior to discharge.

- 9. Management Plans.** Except as described below, applicants are required to develop and submit a BMP/PP Plan in accordance with Special Provision VII.C.3.a of the General Order, which identifies management measures that will be implemented at the site to control the discharge of pollutants and minimize impacts to water quality. Applicants must consider and identify preventative, control, treatment and response BMPs that may be necessary. The BMP/PP Plan must include, at a minimum, the elements identified in Attachment B-1.

Permittees covered by this General Order may have numerous planned projects in the same watershed with similar discharge characteristics. For example, a water supplier may contract to have maintenance performed on multiple water storage reservoirs or on large sections of pipeline that are all conducted under a common work plan or contract, or a developer may have multiple construction dewatering sites from the same project. For the purpose of this General Order, these multiple discharges may be considered under a single application provided that the application contains adequate information and justification to assure that enrollment of multiple discharge points from similar projects meet the requirements of this General Order.

- 10. Project map(s), site drawing, and photographs.** The project map(s) must include the location of the project, discharge point(s), and receiving water. The map shall also identify drinking water supply wells and residences within 1,500 feet and groundwater contamination sites within ½ mile of the proposed project site. The site drawing must identify BMPs and treatment systems, site runoff and conveyance systems, such as storm drains and drainage ditches through which the proposed discharge would travel. Photographs should be included to supplement site and receiving water characterization.

- 11. Fee Requirements.** Information concerning the applicable fees can be found at <http://www.waterboards.ca.gov/resources/fees>. Applicants enrolling for coverage under this General Order are required to submit the appropriate filing fee as required by Title 23 of the CCR, Division 3, Chapter 9, Article 1. When mitigated through implementation of appropriate management practices, treatment and/or controls, low threat discharges, as defined under this General Order, pose no adverse effects to beneficial uses of the receiving waters. In accordance with State Water Board Annual Fee Schedules per the CCR, the discharges covered under this General Order are of low threat and low complexity and are within category 3 of the de minimis discharges that are regulated under a general NPDES Permit that require minimal or no additional treatment systems to meet limits and pose no significant threat to water quality. If the proposed discharge has a duration of one year or more, an annual filing fee will be required each year.
- 12. Ability to Comply.** Applicants must indicate whether the discharge is believed to have acute or chronic toxicity, chemical or organic constituents, sediment, total suspended solids, BOD<sub>5</sub>, bacteria, pesticides, oil and grease, radioactivity, salinity or temperature that may violate receiving water objectives of this permit or adversely impact beneficial uses of the receiving water. If the discharge is expected to comply, the applicant shall provide an explanation of ability to comply considering the receiving water quality, discharge water quality, and the pollutant loading to the receiving water. Discharges that contain pollutants in concentrations that exceed applicable water quality objectives and criteria will not be covered by this General Order.

#### **B. General Order Coverage**

After reviewing the NOI, the Executive Officer will notify each General Order applicant in writing whether or not the proposed discharge is eligible for coverage under the General Order and the Executive Officer's intent with regard to granting authorization to discharge. The Executive Officer will also place a notice of enrollment on the Regional Water Board website for discharges authorized for enrollment under this General Order.

In no case may a discharge occur until the applicant receives written notification of coverage under the General Order of another permit issued or adopted by the State or Regional Water Board.

The determination of low threat and eligibility for coverage under the General Order will be made solely by the Executive Officer and will be based on information provided by an applicant in its NOI, the Regional Water Board's understanding of beneficial uses and water quality objectives, and all other site-specific information that is available for such a determination. Discharge flow characteristics, and anticipated flow rates and volumes, must be specified in the NOI. Discharge and receiving water flow rates will be considered but are not the sole or definitive factors in assessing the eligibility of a specific discharge for coverage under the General Order. The NOA may specify additional site-specific monitoring and reporting requirements.

The Executive Officer may also elect to schedule a Regional Water Board hearing if a proposed low threat discharge meets the eligibility criteria but is controversial and/or if any significant issues are raised by other agencies or the public. The Executive Officer may also require any facility requesting coverage under this General Order to apply for and obtain an individual NPDES permit in accordance with 40 C.F.R. section 122.28(b)(3)(i). Discharges to a WQLS or a waterbody subject to one or more applicable Total Maximum Daily Loads (TMDLs) will be

evaluated on a case-by-case basis for coverage under this General Order or coverage under an individual permit.

In accordance with 40 C.F.R. section 122.28(b)(3)(iii), any facility may request to be excluded from coverage under a general NPDES permit by applying for an individual NPDES permit. The facility must provide justification supporting the request for an individual NPDES permit and reasons why coverage under this General Order is not appropriate. Upon receipt of the request, the Executive Officer will determine if an individual NPDES permit should be issued.

Permittees issued an NOA letter are subject to the terms and conditions of this General Order and are responsible for submitting the annual fee associated with this General Order until a written Notice of Termination (NOT) of coverage has been submitted to the Regional Water Board. If the Regional Water Board issues an individual NPDES permit or WDRs with more specific requirements, the applicability of this General Order is automatically terminated on the effective date of the individual permit.

### **C. Eligibility Criteria**

All Permittees must demonstrate that the proposed discharge meets the definition of low threat in section I.A of the General Order.

## **III. PURPOSE OF ORDER AND ELIGIBILITY REQUIREMENTS**

### **A. Description of Low Threat Discharges and Existing Discharge Requirements**

- 1. General Description.** The General Order is a permitting tool used by the Regional Water Board to efficiently authorize and regulate a large number of similar Permittees. Following a determination of suitability for coverage, the Regional Water Board can efficiently regulate a large number of low threat discharges with a General Order, rather than individual permits, and thereby reduce its administrative burdens and establish planning, operational, monitoring, and reporting requirements which are appropriate for the similar nature of all authorized discharges.

Individuals, public agencies, private businesses, and other entities often need to discharge to surface waters relatively pollutant-free wastewater that poses little threat to water quality. Some discharges may need minimal treatment, such as settling out sediment or dechlorination, in order to remove specific pollutants prior to discharge and/or application of BMPs to assure that the discharge does not create conditions of pollution or nuisance.

Many of these low threat discharges are short-term and may be completed in a period of one day to one week. Examples of short term discharges include projects that need to pump groundwater during well installation, development, test pumping, or purging, or that need to release potable water from water supply maintenance projects. Although these projects occur over very short periods of time, the discharges may involve high flows relative to the receiving water flow and may involve volumes on the order of a thousand gallons per day to over one million gallons per day.

Other types of low threat discharges, such as construction dewatering projects, may occur over a longer period of time, sometimes months and occasionally periods that exceed one year. These discharges typically involve the discharge of smaller daily volumes. Some discharges, such as subterranean seepage dewatering (e.g., dewatering of structures situated below ground level such as basements or roadways) may occur seasonally and

typically during the wet-weather season. Discharge flows may vary depending on the intensity of the wet-weather season.

Duration and flow rate are not necessarily limiting factors in the applicability of this General Order for a specific surface water discharge. The discharge duration, flow rate, and volume must be disclosed and evaluated in relation to the receiving water flow rate and characteristics in order for the Regional Water Board to determine if the discharge will have a low threat to water quality. With proper management measures, higher volume discharges can be implemented in a manner that poses a low threat to water quality.

As the term low threat suggests, discharges authorized by this General Order are similar in that they each present a low threat to water quality and beneficial uses of receiving waters within the Region. Authorization to discharge under the General Order will be granted at the discretion of the Executive Officer following review of information provided by the Permittee in its NOI regarding suitability of a particular discharge for coverage under the General Order. Consultation with public agencies such as local flood control agencies, municipal storm water agencies/permittees, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and National Marine Fisheries Service, may be required as necessary to assure that a low threat discharge will not cause unintentional impacts. Any concerns identified by any of these agencies would need to be mitigated in order for a proposed discharge to qualify as a low threat discharge.

The Regional Water Board has the discretion to limit coverage only to discharges which clearly present no or minimal threat to water quality. In general, the Regional Water Board views low threat discharges as planned, short-term and/or low volume discharges from definable projects with discrete point source discharges where the discharge is controlled to eliminate or reduce pollutants and minimize volume and discharge rates through implementation of BMPs. Discharges that may receive authorization for coverage under this General Order shall not contain pollutants in concentrations that exceed applicable water quality objectives or criteria and must be consistent with applicable State and federal antidegradation policies.

Section I.B of this General Order includes examples of discharges that may be eligible or ineligible for coverage under the General Order. These lists should be viewed as guidance only, as the Regional Water Board will determine eligibility for coverage on a case-by-case basis. It is important to note that, with some exceptions, if discharges proposed for authorization under the General Order must receive anything more than simple, low-technology treatment to meet applicable water quality objectives or criteria, such discharges will not be authorized under the General Order. In general, the Regional Water Board views a need for anything more than simple, low-technology treatment to meet water quality criteria and objectives as indication that a discharge also requires the close attention of an individual discharge permit or other appropriate general permit. Although each discharge proposed for coverage under the General Order will be considered on a case-by-case basis, following are several types of wastewater treatment systems that will likely not be precluded from coverage under the General Order:

- a.** Treatment to remove physical pollutants, such as settleable and suspended solids, turbidity, and excessive temperature from the wastewater;

- b. Treatment to remove chlorine from chlorinated sources that receive treatment by chlorine, such as potable supplies; and
- c. Treatment to adjust pH to fall within the range of 6.5 and 8.5 (or range specified for a specific waterbody identified in Table C-19 of Attachment C) or to decrease temperature so that it will not adversely cause temperature increases in the receiving water or adversely impact beneficial uses.

2. **Eligible Discharges.** A comprehensive list of eligible discharges is included in section I.B.1 of the Order. Potential pollutants of concern for these discharge categories are summarized in the table below.

**Table F-1. Pollutants of Concern by Discharge Type**

Type of Discharge	Pollutants of Concern
Construction dewatering	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Turbidity</li> <li>• Construction materials</li> <li>• Total petroleum hydrocarbons</li> <li>• Naturally occurring metals<sup>1</sup></li> <li>• High temperature</li> </ul>
Discharges from maintenance, disinfection, and repair of water supply structures (e.g., wells, pipelines, tanks, reservoirs) <sup>2</sup>	<ul style="list-style-type: none"> <li>• Chlorine and associated trihalomethanes</li> <li>• Metals<sup>3</sup></li> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Minor adhesives</li> <li>• Scale, rust, corrosion products</li> </ul>
Well installation, development, test pumping, and/or purging <sup>2</sup>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Chlorine and associated trihalomethanes</li> <li>• Metals (naturally occurring)<sup>1</sup></li> <li>• Glues (volatile organic hydrocarbons)</li> </ul>
Hydrostatic testing of new pipelines, tanks, reservoirs, etc., used for purposes other than potable water supply <sup>2</sup>	<ul style="list-style-type: none"> <li>• Scale and corrosion products</li> <li>• Total petroleum hydrocarbons</li> <li>• High temperature</li> <li>• Metals</li> </ul>
Geothermal well testing	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• High temperature</li> <li>• Metals</li> </ul>
Subterranean seepage dewatering (e.g., dewatering of structures situated below ground level such as basements, roadways, etc.)	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Petroleum hydrocarbons</li> <li>• Low dissolved oxygen</li> <li>• Naturally occurring metals<sup>3</sup></li> </ul>

Type of Discharge	Pollutants of Concern
Dewatering of dredge spoils	<ul style="list-style-type: none"> <li>• Sediment</li> <li>• Turbidity</li> <li>• Nutrients</li> <li>• Naturally occurring metals<sup>3</sup></li> <li>• Petroleum hydrocarbons</li> <li>• Grease and oil</li> </ul>
Cooling tower water (non-contact only)	<ul style="list-style-type: none"> <li>• Scale and corrosion products (e.g., chromium)</li> <li>• Biocides</li> <li>• Biofilm</li> <li>• Concentrated minerals and metal ions (e.g., iron, manganese)</li> </ul>
Condensate water (from refrigeration, air-conditioning systems, compressors, etc.)	<ul style="list-style-type: none"> <li>• Petroleum hydrocarbons</li> <li>• Semi-volatile compounds</li> <li>• Concentrated minerals and suspended matter</li> </ul>
Seafood rinse water	<ul style="list-style-type: none"> <li>• Biochemical oxygen demand</li> <li>• Nutrients</li> <li>• Residual chlorine</li> <li>• Pathogenic organisms</li> <li>• Metals (e.g., copper from pipe surfaces)</li> </ul>
Desalination brine	<ul style="list-style-type: none"> <li>• Concentrated salts</li> <li>• Antiscalants (polyphosphates, polymers)</li> <li>• Coagulants (ferric sulfate, ferric chloride,)</li> <li>• Membrane preservative (sodium bisulfite)</li> <li>• Cleaning solutions – organic and inorganic</li> <li>• Total suspended solids</li> <li>• Turbidity</li> </ul>
Bilge Water from harbor pump-out facilities	<ul style="list-style-type: none"> <li>• Exotic species</li> <li>• Petroleum hydrocarbons</li> <li>• Grease and oil</li> <li>• Sediment</li> <li>• Turbidity</li> <li>• Total dissolved solids</li> <li>• Human wastes</li> </ul>
<p><b>Table Notes:</b></p> <ol style="list-style-type: none"> <li>1. Metals, including, but not limited to, arsenic and iron that are naturally occurring in local groundwater as a result of local geology but at concentrations below water quality objectives.</li> <li>2. Unless covered under the State Water Board’s Drinking Water General Permit.</li> <li>3. For example, arsenic, iron, copper, lead, zinc: naturally occurring in groundwater used for water supply or picked up from metallic surfaces of pipes and storage tanks.</li> </ol>	

**3. Ineligible Discharges.** A comprehensive list of ineligible discharges is included in section I.B.3 of the Order. This section provides explanatory details regarding several of the ineligible discharges identified.

- a.** This General Order does not apply to projects that would have adverse impacts on sensitive species and habitat (section I.B.3.k of the Order), including but not limited to, rare, threatened, and endangered species or any other habitat deemed sensitive by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service or any other resource agency. These agencies will be consulted, as necessary, to determine if the proposed discharge or implementation of BMPs (e.g., such as those that require substantial earth movement) have the potential to adversely impact sensitive communities or habitat (aquatic, riparian, or terrestrial (including wetlands and vernal pools)).

If a sensitive community or habitat is identified, the Permittee shall implement any mitigation measures identified by the consulting agency to avoid adverse impacts. If no such mitigation is available, the discharge shall not be authorized to discharge under this General Order.

- b.** This General Order does not apply to proposed discharges that would have significant impacts on biological or cultural resources, aesthetics, or air quality (section I.B.3.m of the Order). Biological, cultural resources and air resource agencies will be consulted, as necessary, to determine if the proposed discharge or implementation of BMPs have the potential to adversely impact biological, cultural, or air resources.

If a proposed discharge requires the implementation of BMPs that involve substantial disturbance of land that has not been disturbed previously, a cultural resources investigation shall be conducted before any substantial disturbance of land occurs in relation to the BMP. The cultural resources investigation will include, at a minimum, a records search for previously identified cultural resources and previously conducted cultural resources investigations of the project parcel and vicinity. This record search will include, at a minimum, contacting the appropriate information center of the California Historical Resources Information System, operated under the auspices of the California Office of Historic Preservation. In coordination with the information center or a qualified historian, a determination shall be made regarding whether previously identified cultural resources will be affected by the proposed project and if previously conducted investigations were performed to satisfy the requirements of CEQA. If not, a cultural resources survey shall be conducted. The purpose of this investigation will be to identify resources before they are affected by a proposed project and avoid the impact. If the impact is unavoidable, mitigation will be determined on a case-by-case basis, as warranted.

- c.** This General Order does not apply to discharges that do not consist solely of the discharge of low threat water (section I.B.3.o of the Order). If a low threat discharge mixes with other discharges (e.g., storm water, domestic wastewater, or industrial process wastewater) prior to contacting receiving water, the other discharges must be covered under a separate and valid NPDES permit if required.

If an applicant plans to have a low threat discharge in combination with another discharge, including, but not limited to storm water, domestic wastewater, or industrial process wastewater, this fact must be disclosed in the NOI and demonstration must be made that the other discharges are covered under any required NPDES permits. Storm water discharges would require coverage under an NPDES permit if it is associated

with (1) construction that involves the disturbance of greater than an acre of land (requires coverage under the Statewide General Construction Storm Water Permit (2) an industrial facility that requires coverage under the Statewide General Industrial Storm Water Permit; or (3) a discharge covered under a municipal storm water permit (individual or general).

- d. Accidental releases from pipeline breaks (section I.B.3.r of the Order) are not appropriately covered under this General Order because these events are unplanned and therefore pollutants such as chlorine cannot be removed prior to discharge. When leaks or spills occur, they should be promptly reported and remediated as necessary. The Regional Water Board will evaluate its response to such events based on the particular circumstances of the release such as the size, effect, and nature of the spill events as well as the Permittee response actions.

**B. Discharge Points and Receiving Waters**

The discharge points and receiving water will be described in the NOI submitted by each Permittee.

**C. Summary of Existing Requirements**

- 1. Effluent limitations contained in General Order No. R1-2015-0003 for discharges from Discharge Points 001, 002, etc., (Monitoring Locations EFF-001, EFF-002, etc.) to inland surface waters, enclosed bays, and estuaries are as follows:

**Table F-2. Historic Effluent Limitations for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Total Suspended Solids (TSS)	mg/L	10	15	30
pH	standard units	--	--	6.5 – 8.5 <sup>1</sup>
Settleable Solids	mL/L	0.1 <sup>2</sup>	--	--
Total Dissolved Solids	mg/L	3		
Chlorine, Total Residual	mg/L	0.011 <sup>4</sup>	--	0.019 <sup>4</sup>
<b>Table Notes:</b>				
1. For waters listed in Table C-4 of Attachment C to General Order No. R1-2015-0003, the pH water quality objectives in Table C-4 applied as effluent limitations. For waters not listed Table C-4 and where pH objectives were not prescribed, the pH of the effluent limitations of 6.5 – 8.5 applied as instantaneous minimum and instantaneous maximum effluent limitations.				
2. Effluent shall not contain any measurable settleable solids, using a detection limit of 0.1 mL/L.				
3. For waters listed in Table C-4 of Attachment C to General Order No. R2-2015-0003, the total dissolved solids water quality objectives in Table C-4 applied as effluent limitations.				
4. Applicable to any discharge of water that was chlorinated.				

- 2. Effluent limitations contained in General Order No. R1-2015-0003 for discharges from Discharge Points 001, 002, etc., (Monitoring Locations EFF-001, EFF-002, etc.) to ocean waters are as follows:

**Table F-3. Historic Effluent Limitations for Discharges to Ocean Waters**

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Grease and Oil	mg/L	25	40	75 <sup>1</sup>
Suspended Solids	mg/L	---	---	60 <sup>1</sup>
Settleable Solids	mL/L	1.0	1.5	3.0 <sup>1</sup>
Turbidity	NTU	75	100	225 <sup>1</sup>
pH	standard units	--	--	6.0 – 9.0 <sup>2</sup>
Chlorine, Total Residual	mg/L	--	--	0.008 <sup>3</sup>
<b>Table Notes:</b> 1. Applied as an instantaneous maximum effluent limitation. 2. Applied as instantaneous minimum and instantaneous maximum effluent limits. 3. Applicable to any discharge of water that was chlorinated.				

**IV. 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**

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act or CWA) 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.

This General Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This General Order is also issued pursuant to section 402 of the federal 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 low threat point source discharges to surface waters of the North Coast Region.

40 C.F.R. section 122.28 authorizes the 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 September 22, 1989, U.S. EPA granted the State of California, through the State Water Board and Regional Water Boards, the authority to issue general NPDES permits pursuant to 40 C.F.R. parts 122 and 123.

Water Code Section 13263(i) authorizes the Regional Water Board to prescribe general WDRs for a category of discharges, which:

1. Are produced by the same or similar operations;
2. Involve the same or similar types of waste;
3. Require the same or similar treatment standards; and,
4. Are more appropriately regulated under general discharge requirements.

This General Order meets these requirements because the discharges that could potentially enroll under this General Order are all de minimis discharges that are high quality, relatively pollutant-free wastewaters that pose a low threat to water quality. These discharges are most typically produced by water suppliers and construction-related operations. Many activities that result in low threat discharges are vital to community development activities, such as construction and provision of reliable water supply. Often there is no practical alternative to surface water discharge for these types of projects. The wastes are similar in that they are relatively pollutant-free and the pollutants that are typically present are generally naturally occurring parameters such as naturally occurring metals and salts, sediment, temperature, and pH. Some of the discharges could also contain chlorine and chlorine by-products that originate from disinfection. The discharges all require similar treatment ranging from no treatment to simple, low technology treatment. Regulating such discharges under a general permit rather than issuing individual permits allows the Regional Water Board to more efficiently permit these similar types of discharges.

## **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.

Pursuant to Water Code section 13389, the action by the Regional Water Board to adopt WDRs and NPDES permit does not trigger the requirements of CEQA, Public Resources Code sections 21100-21177, except for “new sources”<sup>1</sup> as defined by the CWA. Because this General Order precludes from coverage any discharge that is subject to Effluent Limitations Guidelines promulgated pursuant to CWA section 306, “new sources,” as contemplated by the CWA, will not be eligible for coverage, and therefore, the action by the Regional Water Board to adopt WDRs and NPDES permit with this General Order does not trigger the requirements of CEQA.

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

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) 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. The Basin Plan at

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<sup>1</sup> A “new source” is a discharge type for which U.S. EPA has issued New Source Performance Standards. A “new source” does not mean a new discharge. See also section II.A of this Fact Sheet.

section 2, Beneficial Uses, states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. In addition, the Basin Plan implements State Water Board Resolution 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

Beneficial uses applicable to inland surface waters and coastal waters of the North Coast Region are summarized in Table F-4, below:

**Table F-4. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002, etc.	Various	<u>Potential:</u> Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Industrial Process Supply (PRO); Groundwater Recharge (GWR); Freshwater Replenishment (FRSH); Navigation (NAV); Hydropower Generation (POW); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Aquaculture (AQUA); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Inland Saline Water Habitat (SAL); Estuarine Habitat (EST); Marine Habitat (MAR); Wildlife Habitat (WILD); Preservation of Areas of Special Biological Significance (ASBS); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); Shellfish Harvesting (SHELL); Water Quality Enhancement (WQE); Flood Peak Attenuation/Flood Water Storage (FLD); Wetland Habitat (WET); Native American Culture (CUL); and Subsistence Fishing (FISH)

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coast Basin. For low threat discharges, Section IV of the Basin Plan contains an Action Plan for Low Threat Discharges that includes a definition of low threat

discharges (included in section I.A of this General Order) and identifies procedures for regulating low threat point source discharges that can be demonstrated to not have an adverse impact on beneficial uses or water quality and for which there are no other reasonable discharge alternatives. The Action Plan for Low Threat Discharges allows low threat point source discharges to be permitted to surface waters, and provides an exemption from the Basin Plan seasonal and year-round point source discharge prohibition and discharge flow limitation provided that certain conditions identified in section I.A. of this General Order are met. All applicants for coverage under this General Order, must demonstrate that they meet the criteria specified in the Action Plan for Low Threat Discharges, which are included in section I.B.2 of this General Order.

Requirements of this General Order protect beneficial uses by implementing water quality objectives, which are designed to protect such uses. Thus, the requirements of this General Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971 and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters. This plan prohibits elevated temperature waste discharges into cold interstate waters.
2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015, and 2019. The State Water Board adopted the latest amendment on August 7, 2018, and it became effective on February 4, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the Pacific Ocean. In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program for implementation. The Ocean Plan identifies the beneficial uses of ocean waters of the state to be protected as summarized below:

**Table F-5. Ocean Plan Beneficial Uses**

Discharge Points	Receiving Water Name	Beneficial Use(s)
001, 002, etc.	Pacific Ocean	<u>Existing:</u> Industrial water supply; Water contact and non-contact recreation, including aesthetic enjoyment; Navigation; Commercial and sport fishing; Mariculture; Preservation and enhancement of designated Areas of Special Biological Significance (ASBS); Rare and endangered species; Marine habitat; Fish migration; Fish spawning; and Shellfish harvesting.

Requirements of this General Order implement the Ocean Plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 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 February 13, 2001. These rules contain federal water quality criteria for priority pollutants.
4. **State Implementation Policy.** On March 2, 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 April 28, 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 Regional Water Board in the Basin Plan. The SIP became effective on May 18, 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 February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control.

Section 5.3 of the SIP allows for the granting of a categorical exceptions from meeting priority pollutant criteria/objectives for discharges from drinking water systems conducted by owners or operators to fulfill statutory requirements mandated by the federal Safe Drinking Water Act and the California Health and Safety Code. The CTR contains criteria for 126 priority pollutants that may be present in these drinking water systems discharges. In many cases, discharges from drinking water systems do not comply with all of the applicable priority pollutant criteria (such as for the protection of aquatic life) since potable and treated drinking water are only required to comply with MCLs for the protection of public health. The State Water Board reviewed the 126 priority pollutants during preparation of the Statewide Drinking Water System Discharge General Order and found that there are priority pollutant criteria that are more stringent than the established MCLs. The drinking water systems discharges covered under this General Order are in accordance with the exception granted by the State Water Board through Resolution 2014-0067, adopted on November 18, 2014, which allows water purveyors an exception to comply with priority pollutant criteria for the priority pollutants that have an applicable CTR criterion more stringent than the corresponding MCL, or do not have an adopted pollutant-specific MCL. The exception was granted in accordance with the requirements set forth in section 5.3 of the SIP. The exception is limited to drinking water system discharges only and does not apply to discharges where the drinking water discharge is commingled with storm water, construction groundwater, or any other discharge.

Requirements of this General Order implement the SIP.

5. **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 Order promotes that policy by requiring discharges to meet maximum contaminant levels (MCLs) implemented by the Basin Plan that are designed to protect human health and ensure that water is safe for domestic use.

6. **Compliance Schedules and Interim Requirements.** The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

This General Order does not include any compliance schedules or interim effluent limitations.

7. **Antidegradation Policy.** 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 No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional 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 State Water Board Resolution No. 68-16. If the Regional Water Board, subsequent to review of any NOI, finds that the impact of a discharge will not be consistent, then authorization for coverage under this General Order will be denied and coverage under an individual permit will be required (including preparation of an antidegradation analysis).
8. **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. All effluent limitations in this General Order are at least as stringent as the effluent limitations in the previous General Order.
9. **Endangered Species Act Requirements.** This General 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. sections 1531 to 1544). This General Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

#### D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies every two years. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The CWA requires development of a total maximum daily load (TMDL) or alternate program of implementation for each 303(d)-listed pollutant and water body to remedy the impairment. TMDLs establish the maximum quantity of a given pollutant that can be added to

a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On April 6, 2018, the U.S. EPA provided final approval of the 2014 and 2016 303(d) List of Impaired Water Bodies prepared by the state. Certain water bodies in the North Coast Region are listed as impaired for parameters including, but not limited to, nutrients, sediment, temperature, dissolved oxygen, pathogens, aluminum, and pH. The discharges covered by this General Order are low threat discharges and the requirements of this General Order are expected to assure that the discharges covered by this General Order will not cause or contribute to the impairments. If a Permittee is proposing to discharge into a WQLS, the Permittee must provide a wastewater analysis of the 303(d) listed constituents as part of the NOI. In determining suitability for coverage under the General Order, the 303(d) status of the receiving water for a proposed discharge, as well as any TMDLs established in response to 303(d) listing, will be considered by Regional Water Board staff. This General Order does not authorize the discharge of pollutants into a WQLS that is impaired for a constituent that exists in the low threat discharge at a concentration greater than the criteria used to establish the impairment of the water body.

#### **E. Other Plans, Policies, and Regulations**

1. State Water Board Water Quality Order No. 2014-0057-DWQ as amended by Order No. 2015-0122 DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial Storm Water General Permit) may be applicable to Permittees seeking coverage under this General Order for low threat discharges. Section IV of Order No. 2014-0057-DWQ authorizes non-storm water discharges from the following discharges to municipal storm drain systems covered by a Regional Water Board individual permit or by State Water Board Water Quality Order No. 2013-0001-DWQ, General Permit for Storm Water Discharges From Small Municipal Separate Storm Water Sewer Systems if the municipal storm water Permittee has an approved programmatic best management plan that applies to non-storm water discharges to the permitted storm drain system: fire hydrant and fire prevention or response system flushing; potable water sources including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water and atmospheric condensate including refrigeration, air conditioning and compressor condensate; irrigation drainage and landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with the manufacturer's label; uncontaminated natural springs, groundwater, foundation drainage, and footing drainage; seawater infiltration where the seawater is discharged back into the source; and incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of a facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains). Non-storm water discharges to surface waters and MS4s that do not have an approved programmatic BMP plan, must be covered by an NPDES permit, such as this General Permit for low threat discharges.
2. State Water Board Water Quality Order No. 2009-0009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ, NPDES General Permit No. CAS000002, General Permit for Storm Water Runoff Discharges Associated with Construction Activity may be applicable to permittees seeking coverage under this General Order.

3. State Water Board Water Quality Order No. 2014-0194-DWQ, General Permit No. CAG140001, Statewide NPDES Permit for Drinking Water System Discharges authorizes discharges from drinking water systems with greater than 1,000<sup>2</sup> connections that are regulated by the State Water Board's Division of Drinking Water (DDW) or a local county department of health, with the primary purpose of transmitting, treating, and distributing safe drinking water, therefore, this General Order does not cover drinking water systems that are eligible for coverage under the Statewide NPDES Permit for Drinking Water System Discharges. The Statewide General Permit does not cover non-community water systems or non-transient water systems, as defined in Attachment A. Therefore, this General Order will continue to provide coverage for non-community water systems or non-transient water systems, or any additional low threat drinking water system discharges which are not otherwise eligible for coverage under the Drinking Water General Permit.
4. When applicable, state law requires dischargers to file a petition with the State Water Board, Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of the watercourse. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.

## V. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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 water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exists.

### A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** The discharge of any wastes, other than those that meet the eligibility criteria in section I of this General Order are prohibited unless the Permittee obtains coverage under another general or individual order that regulates the discharge of such wastes.

This prohibition is retained from General Order No. R1-2015-0003. NPDES regulations at 40 C.F.R. section 122.28 and Water Code section 13263 (i) authorize the issuance of general NPDES permits and general WDRs to regulate a category of point sources, which involve the same or substantially similar types of operations; discharge the same type of wastes; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general permit than individual permits.

The advantage to the Regional Water Board in issuing a general permit is that a group of similar Permittees can be regulated by one permit, instead of with individual permits,

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<sup>2</sup> Systems with fewer than 1,000 connections that discharge to waters of the United States have the option to enroll under the Drinking Water General Permit.

thereby reducing some administrative burden. Before authorization to discharge under the General Order can be granted, however, the Regional Water Board must be assured that all authorized Permittees have similarities required by the NPDES regulations and the Water Code. By this prohibition, the Regional Water Board is therefore prohibiting discharges which are not low threat as represented by the Permittee in its NOI or as contemplated by the Regional Water Board.

- 2. Discharge Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code, is prohibited.

This prohibition is retained from General Order No. R1-2015-0003 and is based on section 13050 of the Water Code and section 5411 of the California Health and Safety Code.

- 3. Discharge Prohibition III.C.** The discharge of waste at any point not described by the Permittee in its NOI or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

This prohibition is newly established in this General Order, and is a general prohibition that allows the Permittee to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

- 4. Discharge Prohibition III.D.** Any low threat discharge in excess of the flow rate, volume or duration described by the Permittee in its NOI, or as authorized by the Executive Officer, is prohibited.

This prohibition is retained from General Order No. R1-2015-0003. Authorization to discharge under the General Order will be granted by the Executive Officer only following a determination that a discharge is low threat, as that term is described and contemplated by the General Order. Significant factors to be weighed in making such a determination are the volume and rate of discharge. Discharge rates or volumes greater than what are described by a Permittee in its NOI or approved by the Regional Water Board may have significant adverse impacts to receiving waters, and therefore, such discharges will be viewed as unauthorized discharges and may subject the Permittee to all available and appropriate penalties pursuant to the Water Code and the CWA.

- 5. Discharge Prohibition III.E.** Discharges containing pollutants which exceed applicable water quality objectives or criteria, or discharges which, wholly or in combination with other discharges, cause or contribute to exceedances of applicable water quality criteria or objectives established by the Basin Plan, Ocean Plan, or CWA for surface waters are prohibited and are precluded from coverage under this General Order. Applicable numeric water quality criteria and objectives are presented in Attachment C of this General Order.

This prohibition is retained from General Order No. R1-2015-0003. Discharges which contain pollutants at concentrations exceeding applicable water quality criteria and objectives, including any waterbody-specific TMDL, may cause or contribute to violations of water quality standards, and therefore, cannot be viewed as low threat. Such discharges are precluded from coverage under the General Order. If, following authorization, a discharge is found to contain pollutants at concentrations exceeding applicable water quality criteria or objectives, such a discharge will be viewed as an unauthorized discharge, and, as such, the Permittee will be subject to all available and appropriate penalties pursuant to the Water Code and the CWA and the discharge will be required to cease.

**6. Discharge Prohibition III.F.** The discharge of polluted groundwater to waters of the State is prohibited.

This prohibition is retained from General Order No. R1-2015-0003. Projects that involve the discharge of groundwater have the potential to contain naturally occurring constituents that exceed applicable water quality objectives (e.g., naturally occurring arsenic) or to draw in groundwater that has been contaminated by human activities. Such projects will not receive authorization for coverage under this General Order. The NOI requires identification of known groundwater contamination sites within a one half-mile radius of the project site.

**7. Discharge Prohibition III.G.** The discharge of detectable levels of petroleum, petroleum constituents, or volatile halogenated compounds from construction dewatering sites, treated bilge water, or other similar low-threat discharges is prohibited<sup>3</sup>.

This prohibition is retained from General Order No. R1-2015-0003. Discharges from construction sites have the potential to contain pollutants related to the use of petroleum products and solvents used for the operation and maintenance of vehicles, machinery, and pumps. The NOI requires demonstration that pollutants related to the use of petroleum products are not discharged to surface waters.

**8. Discharge Prohibition III.H.** The discharge of domestic, agricultural, commercial and/or industrial process waste is prohibited.

This prohibition is retained from General Order No. R1-2015-0003. Discharges with any domestic, agricultural, commercial, or industrial waste component are not considered low threat and therefore must be authorized and regulated by an individual discharge permit.

**9. Discharge Prohibition III.I.** The discharge of an effluent with constituents in excess of waste load allocations identified in any TMDL applicable to the location of the discharge is prohibited.

This prohibition is retained from General Order No. R1-2015-0003. Discharges that contain constituents in excess of applicable limits required by a TMDL are not considered low threat and therefore must be authorized and regulated by an individual discharge permit, if appropriate.

**10. Discharge Prohibition III.J.** The contact of low threat discharges with contaminated soil or groundwater is prohibited.

This prohibition is retained from General Order No. R1-2015-0003. If a low threat discharge comes in contact with contaminated soil or groundwater, the discharge would likely entrain pollutants that are not authorized under this General Order and would no longer qualify as a low threat discharge.

<sup>3</sup> For the purposes of this General Order, levels of detection are as follows:

<u>Constituent</u>	<u>Units</u>	<u>Detection Limit</u>
Petroleum Hydrocarbons	µg/L	50
Benzene	µg/L	0.5
Toluene	µg/L	0.5
Xylene	µg/L	0.5
Ethylbenzene	µg/L	0.5
Volatile Halogenated Compounds	µg/L	0.5

**11. Discharge Prohibition III.K.** The discharge of elevated temperature wastes<sup>4</sup> to COLD interstate waters is prohibited.

This prohibition is retained from Order No. R1-2015-0003, and is based on the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan). The Thermal Plan defines elevated temperature as “Liquid, solid, or gaseous material, including thermal waste discharged at a temperature higher than the natural temperature of the receiving water. Irrigation return water is not considered elevated temperature waste for the purpose of this plan.” In the North Coast Region, examples of interstate waters include the Klamath, Smith, Applegate and Illinois Rivers.

**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. The discharge authorized by this General Order must meet minimum federal technology-based requirements based on 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:

- f.** 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.
- g.** 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.
- h.** Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including biochemical oxygen demand (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.

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<sup>4</sup> Elevated temperature waste is defined in the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* as “Liquid, solid, or gaseous material, including thermal waste discharged at a temperature higher than the natural temperature of the receiving water. Irrigation return water is not considered elevated temperature waste for the purpose of this plan.”

- i. 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 effluent limitations, guidelines and standards (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 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 Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

## **2. Applicable Technology-Based Effluent Limitations**

This General Order requires the use of BMPs to control and abate the discharge of pollutants to surface waters and to achieve compliance with BAT/BCT requirements and compliance with Basin Plan water quality objectives. Discharges approved for coverage under this General Order are expected to comply with all water quality objectives with implementation of BMPs.

Technologies used for treatment of low threat discharges include simple measures such as settling, dechlorination, and pH and temperature adjustment. These technologies are readily available and represent accepted standards of treatment for the categories of discharges that may be authorized under this General Order. The cost of application of these technologies in relation to the effluent reduction benefits to be achieved from the application have been considered and determined to be reasonable. Non-water quality environmental impacts have been considered and mitigation measures have been identified in section VII.C.3.b of the General Order. All other C.F.R. section 125.3(d) factors are not directly applicable to low threat discharges due to the fact that these are generally short-term and temporary discharges.

This General Order will authorize numerous types of high quality discharges that are relatively pollutant-free and pose a low threat to water quality and beneficial uses of receiving waters. The primary mechanism for regulating/controlling such discharges will be through the development and implementation of a BMP/PP Plan by each authorized Permittee, as required by section VII.C.3.a of the Order.

NPDES regulations at 40 C.F.R. section 122.44 (k) allow the use of BMPs to take the place of numeric limitations in discharge permits under certain circumstances, including when numeric effluent limitations are infeasible. In these circumstances, discharges which contain pollutants at concentrations greater than applicable water quality objectives and criteria will be precluded from coverage under this General Order. Pollutants of concern are therefore difficult to anticipate for each type of possible discharge; and it is therefore similarly infeasible to establish numeric effluent limitations to regulate/control each type of possible discharge authorized by this General Order. In the General Order, Regional Water Board staff view the thoughtful and effective implementation of BMPs as implementation of technology-based requirements and, with the prohibition of discharges that contain pollutants at concentrations greater than applicable water quality standards, as the means to assure protection of water quality standards. In particular, BMPs will be directed to control "physical" pollutants such as TSS, settleable solids, and turbidity.

## 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.

### 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. **Beneficial Uses.** Low threat discharges may potentially be authorized to discharge to all surface waters of the North Coast Region. Beneficial use designations for receiving waters are presented in section IV.C of this Fact Sheet.
- b. **Basin Plan Water Quality Objectives.** The Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries. For waters designated for use as MUN, the Basin Plan establishes, as applicable water quality criteria, the MCLs established by DDW for the protection of public water supplies at title 22 of the CCR section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals). This General Order requires the Permittee to analyze the proposed discharge for the pollutants identified in section VII. of the NOI and in Tables C-1, C-2 and C-3 of Attachment C and submit the analytical results with the NOI.

At title 22, division 4, chapter 15 of the CCR, DDW has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply. For purposes of this General Order, these water quality criteria are assumed to be applicable to all inland waters, enclosed bays, and estuaries of the North Coast Region.

- c. **Ocean Plan Water Quality Objectives.** Water quality criteria applicable to ocean waters of the Region are established by the Ocean Plan, which includes general provisions and water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. These water quality objectives from the Ocean Plan are incorporated as receiving water limitations in section VI.B of the General Order. Table 1 of the Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. The General Order does not authorize discharges that have the reasonable potential to exceed water quality objectives in the Ocean Plan. This General Order requires the Permittee to analyze the proposed discharge for the pollutants identified in section VII. of the NOI and in Table C-21 of Attachment C and submit the analytical results with the NOI.
- d. **SIP, CTR, and NTR.** Water quality criteria and objectives applicable to the receiving water are established by the CTR, established by the U.S. EPA at 40 C.F.R. section 131.38; and the NTR, established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

The SIP, which is described in section IV.C.5 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires Permittees to submit data sufficient to do so.

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 SIP requires water quality criteria be properly adjusted for hardness, using the hardness of the receiving water. The hardness-dependent metal criteria include cadmium, copper, chromium (III), lead, nickel, silver, and zinc.

This General Order requires the Permittee to analyze the proposed effluent for priority pollutants and hardness and analyze the upstream receiving water for hardness and submit the analytical results with the NOI. Table C-2 of Attachment C includes screening levels for hardness-dependent metals. The minimum observed receiving water hardness is used to calculate the criteria. To simplify the permitting process criteria were calculated for hardness values in increments of 10 mg/L. For instance, for waterbodies with hardness ranging from 11 mg/L to 20 mg/L, criteria were calculated using a hardness of 11 mg/L.

- e. **Thermal Plan.** The *Water Quality Control Plan for Control of Temperature in the Coastal Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan), which establishes water quality objectives for temperature in the coastal and interstate waters and enclosed bays and estuaries of the Region, as well as ocean waters. This General Order requires the Permittee to analyze the proposed effluent for temperature and submit the analytical results with the NOI.

The General Order does not authorize discharges that have the reasonable potential to exceed water quality objectives from the Basin Plan, Ocean Plan, SIP, CTR, NTR, or Thermal Plan.

### 3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 122.44(d) require effluent limitations to control all pollutants which 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.

This General Order requires Permittees seeking authorization to discharge under this General Order to provide analysis of the proposed effluent and demonstrate that the discharge does not pose reasonable potential to exceed any water quality objective. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control<sup>5</sup>. 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.

Prior to enrolling a Permittee under this General Order, Regional Water Board staff shall conduct an RPA in accordance with section 1.3, Step 7 of the SIP by comparing the results to the screening criteria contained in Attachment C to determine reasonable potential. If reasonable potential is found for a proposed discharge to exceed or cause an exceedance of any water quality objective in Attachment C, the discharge will not be authorized under this General Order, as this General Order does not contain effluent limitations for any of the pollutants identified in Attachment C.

**a. Inland Surface Waters, Enclosed Bays, and Estuaries**

- i. Total Suspended Solids and Settleable Solids.** For inland surface waters, the Basin Plan states that “[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.” Suspended solids and settleable solids are constituents of concern in low threat discharges and are a component of sediment. Many water bodies in the North Coast Region are on the CWA 303(d) list for sediment. This General Order retains total suspended solids effluent limitations of 10 mg/L as a monthly average, 15 mg/L as a weekly average, and 30 mg/L as a maximum, based on technology-based standards for tertiary-treated effluent which has been established as a standard that is protective of receiving waters. This General Order also retains an effluent limitation for settleable solids of <0.1 mL/L based on protection of the narrative settleable solids objective.
- ii. pH.** The effluent limitations for pH are specific to the receiving water and are based on the water quality objectives for pH established in Chapter 3 and identified in Table 3-1 of the Basin Plan.

For waters not listed in Table 3-1 of the Basin Plan (included as Table C-19 of Attachment C) and where pH objectives are not otherwise prescribed, this General Order requires that the pH of the discharge be not less than 6.5 nor greater than 8.5, based on the general pH water quality objective specified in Chapter 3 of the Basin Plan.

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<sup>5</sup> See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

- iii. **Total Dissolved Solids.** For waters listed in Table C-19 of Attachment C (Table 3-1 from the Basin Plan), the total dissolved solids water quality objectives in Table C-19 of Attachment C shall apply as effluent limitations.

This effluent limitation is based on water quality objectives for specific water bodies identified in Table 3-1 of the Basin Plan.

- iv. **Chlorine Residual.** Many low threat discharges will likely originate from potable water supplies (e.g., hydrostatic test waters, etc.) and other discharges that may contain chlorine. Chlorine is extremely toxic to aquatic organisms. Due to the potential for chlorine to be discharged, these discharges have a reasonable potential to cause or contribute to an instream excursion above the Basin Plan’s narrative toxicity objective which states “[a]ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.” The Regional Water Board considers any chlorinated discharge as having the reasonable potential to cause or contribute to exceedances of this water quality objective for toxicity, and therefore this General Order includes effluent limitations for chlorine. U.S. EPA has established the following criteria for chlorine-produced oxidants for protection of freshwater aquatic life in Quality Criteria for Water 1986 (The Gold Book, 1986, EPA 440/5-86-001).

Chronic Criterion	Acute Criterion
0.011 mg/L	0.019 mg/L

The U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Because projects that would be granted coverage under this General Order are typically short in duration, reasonable potential exists for acute toxicity over short periods of time and an average 1-hour limitation is considered more appropriate than an average daily limitation. Average 1-hour and 4-day effluent limitations for chlorine, based on these criteria, are included in this General Order.

- v. **Priority Pollutants.** This General Order is not intended to regulate discharges that have the reasonable potential to exceed water quality objectives; such discharges would be more appropriately regulated by an individual order. Since this is a general order for all low threat discharges to surface waters in the North Coast Region of California, this General Order establishes screening levels in Attachment C, Tables C-1 and C-2 that are protective of beneficial uses under all discharge conditions and are based on the most protective water quality criteria for priority pollutants from the CTR and MCLs. Permittees enrolling under this General Order are required to analyze the proposed discharge for constituents regulated under the CTR and submit the results as part of the NOI. If the analytical data demonstrate that any constituent concentrations in the discharge exceed the water quality screening levels listed in Attachment C, the discharge will not be allowed under this General Order. If all constituent concentrations are below the

screening levels listed in Attachment C, the discharge may be authorized for coverage under this General Order, provided all of the eligibility criteria and enrollment requirements are met.

**b. Ocean Waters**

- i. Grease and Oil.** Table 2 of the Ocean Plan includes 30-day average, 7-day average, and maximum effluent limitations of 25 mg/L, 40 mg/L, and 75 mg/L, respectively, for grease and oil. General Order No. R1-2015-0003 established effluent limitations for grease and oil based on the Ocean Plan, and these effluent limitations have been retained in this General Order.
- ii. Suspended Solids.** Table 2 of the Ocean Plan includes effluent limitations for suspended solids that the discharger shall, as a 30-day average, remove 75 percent of suspended solids from the influent stream before discharging wastewaters to the Ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L. General Order No. R1-2015-0003 established an effluent limitation for suspended solids of 60 mg/L as an instantaneous maximum, and this effluent limitation has been retained in this General Order.
- iii. Settleable Solids.** Table 2 of the Ocean Plan includes 30-day average, 7-day average, and maximum effluent limitations of 1.0 mg/L, 1.5 mL/L, and 3.0 mL/L, respectively, for settleable solids. General Order No. R1-2015-0003 included effluent limitations for settleable solids based on the Ocean Plan and to protect the beneficial uses of the receiving waters. These effluent limits have been retained in this General Order.
- iv. Turbidity.** Table 2 of the Ocean Plan includes 30-day average, 7-day average, and maximum effluent limitations of 75 NTU, 100 NTU, and 225 NTU, respectively, for turbidity. General Order No. R1-2015-0003 established effluent limitations for turbidity based on the Ocean plan, and these effluent limitations have been retained in this General Order.
- v. pH.** Table 2 of the Ocean Plan includes effluent limitations for pH requiring that the pH be maintained within the limit of 6.0 to 9.0 at all times. General Order No. R1-2015-0003 included effluent limitations for pH based on the Ocean Plan. These effluent limitations are retained in this General Order.
- i. Total Residual Chlorine.** The Ocean Plan contains total chlorine residual objectives for ocean waters for the protection of marine aquatic life. Table 1 of the Ocean Plan includes 6-month median, daily maximum, and instantaneous maximum effluent limitations of 0.002 mg/L, 0.008 mg/L, and 0.06 mg/L, respectively, for total residual chlorine. The water quality criteria recommended by U.S. EPA and established by the Ocean Plan are, in effect, non-detectable concentrations by the common amperometric analytical method used for the measurement of chlorine. To protect aquatic life, limitations for total residual chlorine are necessary for discharges that have been chlorinated, and are retained from Order No. R1-2015-0003.

## **D. Final Effluent Limitation Considerations**

### **1. 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) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in General Order No. R1-2015-0003.

### **2. Antidegradation Policies**

State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality Waters in California (the Antidegradation Policy) requires that disposal of waste into waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters is higher than established by adopted policies and that higher quality water shall be maintained to the maximum extent possible consistent with the Antidegradation Policy. The Antidegradation Policy requires that (1) higher quality water will be maintained until it has been demonstrated to the state that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the policies; and (2) any activity that produces a waste or may produce waste or increased volume or concentration of waste and discharges to existing high quality water will be required to meet waste discharge requirements that will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

The Regional Water Board has determined that discharges authorized under this General Order will be consistent with applicable federal and state antidegradation policies. This General Order retains requirements that were included in General Order No. R1-2015-0003 to assure that water quality objectives are met and that existing water quality is protected to the greatest extent possible. For example, General Order No. R1-2015-0003 and this General Order require characterization of the discharge and the receiving water, a certification that no pollutants will be discharged at levels that exceed water quality objectives, an evaluation of feasible alternatives to the discharge, and a description of treatment measures and BMPs that will be implemented to remove pollutants and minimize the rate, volume, and duration of the discharge. These requirements will help assure that low threat discharges will protect the existing quality of water where that quality exceeds the objectives set forth in the Basin Plan and State Water Board plans and policies adopted for the protection of water quality, and will at a minimum, maintain water quality to protect existing beneficial uses, and will not impede recovery of those waterways that are not meeting all water quality objectives. Nonetheless, because of the potential for increased numbers of discharges to North Coast streams under this General Order, the Regional Water Board has considered the requirements of the federal and state antidegradation policies.

Under the federal antidegradation policy, existing instream water uses and the level of water quality necessary to protect existing uses must be maintained and protected. Where,

however, the quality of the water exceeds levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and out of the water, that quality must be maintained and protected unless the State finds, after ensuring public participation, that:

- a.** Such activity is necessary to accommodate important economic or social development in the area in which the waters are located,
- b.** Water quality is adequate to protect existing beneficial uses fully, and
- c.** The highest statutory and regulatory requirement for all new and existing point source discharges and all cost-effective and reasonable best management practices for non-point source control are achieved (40 C.F.R. § 131.12).

The federal policy also 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 No. 68-16 (Resolution) prior to the adoption of the federal policy. The Resolution incorporates the federal antidegradation policy and requires that existing quality of waters be maintained unless degradation is justified based on specific findings. California's antidegradation policy is also included in the North Coast Basin Plan as a General Objective (Basin Plan pages 3-2.00 to 3-3.00).

California's antidegradation Policy applies to both groundwater and surface waters whose quality meets or exceeds (are better than) water quality objectives. The State policy establishes several conditions that must be met before the quality of high quality waters may be lowered by waste discharges.

The State must determine that lowering the quality of high quality waters:

- a.** Will be consistent with the maximum benefit to the people of the state;
- b.** Will not unreasonably affect present and anticipated beneficial uses of such water; and
- c.** Will not result water quality less than that prescribed in state policies (e.g., water quality objectives).
- d.** In addition, before any degradation of water quality is permitted, it must be shown that the discharge will be required to meet waste discharge requirements that result in best practicable treatment or control of the discharge necessary to assure that:
  - i.** Pollution or nuisance will not occur; and
  - ii.** The highest water quality consistent with maximum benefit to the people of the State is maintained.

Only those discharges that do not exceed Basin Plan water quality objectives or criteria, the CTR objectives, or any other applicable Regional Water Board, State Water Board, or federal objective or criteria promulgated to protect water quality and beneficial uses are eligible to enroll under this General Order. Where a low threat discharge meets water quality objectives, it would not be expected to adversely affect the present or future beneficial use of surface waters, nor would it be expected to result in water quality less than that prescribed in the Basin Plan.

There may, however, be the potential for a small reduction in water quality from multiple low threat discharges cumulatively affecting water quality or where a discharge would be allowed that met water quality objectives but exceeded background levels of the receiving water. The minor impact on water quality is, however, outweighed by the benefit of these low threat discharges, which are necessary to accommodate important economic or social development in the North Coast Region. Any such potential change in water quality is, therefore, consistent with the maximum benefit to the people of California. All of the potentially low threat discharges identified in section I.B.1 of this General Order are associated with activities vital to communities. Activities such as construction dewatering, well development, and pipeline and reservoir maintenance that may produce discharges have been identified as having a potentially low threat to water quality and serve important economic and social interests.

In order to enroll under this General Order, each Permittee will be required to implement BMPs and treatment, as necessary, to assure that the discharge will not adversely affect beneficial uses of the receiving water and will comply with all applicable water quality objectives. Such BMPs could include BMPs designed to prevent, reduce or eliminate the generation of pollutants and waste; BMPs designed to control or manage pollutants and waste after they are generated, but before they come into contact with receiving water; BMPs designed to remove pollutants and waste from water prior to discharge; and BMPs intended to respond to leaks, spills and other releases with containment, control, and cleanup measures to prevent or minimize the potential for the discharge of pollutants and to minimize the adverse effects of such discharges. The BMPs identified by the Permittee will be submitted as part of the NOI for enrollment under this General Order. This General Order requires that the BMP/PP Plan include, at a minimum, the elements identified in Attachment B-1. The implementation of these measures will assure the discharge is meeting the best practicable treatment or control of the discharge necessary to assure that the discharge will not cause pollution or nuisance, and result in the highest water quality consistent with maximum benefit to the people of the State.

### **3. Stringency of Requirements for Individual Pollutants**

This General Order contains both technology-based requirements and WQBELs for individual pollutants. The technology-based requirements consist of a requirement to develop and implement an approved BMP/PP Plan to regulate and control the low threat discharge to minimize the volume, discharge rate, and duration of the discharge and to assure that the discharge does not cause erosion, scouring, adverse impacts to aquatic life, or any other adverse impacts. These requirements are discussed in section V.B of this Fact Sheet. This General Order's technology-based requirements implement the minimum, applicable federal technology-based requirements. In addition, this General Order contains effluent limitations for total suspended solids, pH, settleable solids, total dissolved solids, and chlorine residual for discharges to inland surface waters, enclosed bays, and estuaries, and grease and oil, suspended solids, settleable solids, turbidity, pH and chlorine residual for discharges to ocean waters that are more stringent than the minimum, federal technology-based requirements but are necessary to meet water quality standards. These requirements are discussed in section V.C.3 of this Fact Sheet.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant

to federal law and are the applicable federal water quality standards. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless “*applicable water quality standards for purposes of the CWA*” pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this General Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

The Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

**E. Land Discharge Specifications**

This General Order is not applicable to discharges that are solely to land. Discharges that are solely to land may separately require WDRs or a waiver of WDRs.

Land discharge is a means by which a Permittee enrolled under this General Order may reduce the volume and duration of discharge to surface waters. Such a discharge shall not cause the creation of pollution or nuisance conditions.

Land disposal methods that a Permittee may elect to use as a manner of reducing the flow rate and volume of low threat discharge to surface waters may include, but are not limited to, spray or overland flow disposal, percolation trenches or basins, evaporation trenches or basins, subsurface infiltration, or other similar disposal methods. The NOI must describe how any proposed land disposal method will be implemented so that it does not create pollution or nuisance conditions, including but not limited to erosion, localized flooding, breeding of insects or other vectors of health significance, or the discharge of fertilizers, herbicides, pesticides, salts, nutrients, or any other pollutant of concern to surface or groundwater.

**F. Water Recycling Specifications**

The General Order is not applicable to discharges that are solely recycling uses of wastewater. Discharges that are solely recycling uses may separately require WDRs or a waiver of WDRs.

On January 6, 1977, the State Water Board adopted Resolution No. 77-1, “*Policy with Respect to Water Reclamation in California*”, which states that the State Water Board and Regional Water Board shall encourage recycling of wastewater which does not adversely impact water rights or unreasonably impair instream beneficial uses or place an unreasonable burden on present water supply systems.

Furthermore, the Action Plan for Low Threat Discharges includes criteria for allowing low threat, point source discharges, including a demonstration that the discharge is necessary because no feasible alternative to the discharge, including recycling, is available and that the discharge is limited to that increment of wastewater that remains after implementation of all reasonable alternatives for recycling or disposal.

Consistent with Resolution No. 77-1 and the Action Plan for Low Threat Discharges, the Regional Water Board encourages Permittees authorized under this General Order to recycle discharge water. Discharges authorized under this General Order that are recycled are not required to obtain any other WDRs if the discharge is collected and recycled for landscape irrigation or other uses in a manner that augments the existing supply, or if the discharge is directly or indirectly

discharged to storm water capture basin(s), low impact development features, or other groundwater recharge system(s).

## **VI. RATIONALE FOR RECEIVING WATER LIMITATIONS**

### **A. Surface Water – Inland Waters, Enclosed Bays, and Estuaries**

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional 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 biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, total dissolved solids, toxicity, and turbidity.

The dissolved oxygen limitation in this General Order reflects the new Basin Plan dissolved oxygen (DO) limits that were adopted by the Regional Water Board on June 18, 2015, and became effective beginning April 24, 2017, after receiving approval from U.S. EPA. The new Basin Plan DO limitation specifies limits for the MAR, SAL, WARM, COLD, and SPWN beneficial uses, in addition to site specific background concentrations for waterbodies for which aquatic life-based DO requirements are not achievable.

The fecal coliform, enterococci, and *E. coli* limitations in this General Order reflect the revised bacteria provisions of the Water Quality Control Plan for Inland Surface Water, Enclosed Bays, and Estuaries adopted by the State Water Resources Control Board on August 7, 2018, and which became effective on February 4, 2019. Staff added the numeric water quality objectives for bacteria and removed the narrative bacteria objective because staff determined that compliance with the numeric water quality objectives will ensure the protection of beneficial uses for low-threat discharges. For this General Order staff prefer determining compliance with numeric objectives, rather than narrative objectives that require determining natural background levels of bacteria and comparing those to receiving water data.

### **B. Surface Water – Ocean Waters**

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The State Water Board adopted water quality criteria as water quality objectives in the Ocean Plan. Receiving water limitations within this General Order reflect all applicable, general water quality objectives of the Ocean Plan, and the terms and conditions required by State Water Board Resolution No. 2007-0058.

The Ocean Plan includes numeric and narrative water quality objectives for various beneficial uses. This General Order contains receiving water limitations for discharges to the Pacific Ocean based on the Ocean Plan numerical and narrative water quality objectives for bacteria, dissolved oxygen, floating particulates, oil and grease, pH, discoloration, natural lighting, deposition of

solids, dissolved sulfides, organic materials in sediments, Table 1 parameters, nutrient materials, radioactive wastes, and biological characteristics.

The fecal coliform, total coliform, and *E. coli* limitations in this General Order reflect the revised bacteria provisions within Water Quality Control Plan for Ocean Waters adopted by the State Water Resources Control Board on August 7, 2018, and became effective on February 4, 2019.

Receiving water quality is a result of many factors, some unrelated to the discharges which will be authorized by the General Order. This General Order considers these factors and is designed to minimize the influence of low threat discharges on the receiving waters of the North Coast Region.

### **C. Groundwater**

Groundwater limitations in this Order have been modified from Order No. R1-2015-0003, and are included in the Order to protect the beneficial uses of the underlying groundwater. The beneficial uses of groundwater in the region are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters. Low threat discharges shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater. Groundwater data must be evaluated using appropriate statistical tools to determine when groundwater degradation is occurring.

## **VII. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions**

#### **1. Federal 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 to the Order. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The rationale for the special conditions contained in the Order is provided in section VII.B, below.

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) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this 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).

#### **2. Regional Water Board Standard Provisions**

In addition to the Federal Standard Provisions (Attachment D), the Permittee shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VII.A.2 of this General Order.

- a. General Order Provision VII.A.2.a identifies the State's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., 40 C.F.R. sections 122.41(j)(5) and (k)(2)).
- b. General Order Provision VII.A.2.b requires the Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any General Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person.

**B. Monitoring and Reporting Program (MRP) Requirements**

The Permittee shall comply with the MRP, included as Attachment E of this Order, and future revisions thereto.

**C. Special Provisions**

**1. Reopener Provisions**

- a. **Standard Revisions (Special Provision VII.C.1.a).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, which include the following:
  - ii. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this General Order in accordance with such revised standards.
  - iii. 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. **303(d)-Listed Pollutants (Special Provision VII.C.1.b).** This provision allows the Regional Water Board to reopen this General Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.
- c. **Chlorine Residual Policy (Special Provision VII.C.1.c).** The State Water Board is developing a Total Residual Chlorine policy, which, when adopted, is intended to establish consistent standards and implementation procedures for regulating chlorine statewide. This reopener allows the Regional Water Board to reopen this General Order to include a revised reporting level to determine compliance with effluent limitations for total residual chlorine if a statewide policy for total residual chlorine is adopted during the term of this General Order.

**2. Special Studies, Technical Reports and Additional Monitoring Requirements – Not Applicable**

**3. Best Management Practices and Pollution Prevention**

- a. **Best Management Practices and Pollution Prevention (BMP/PP) Plan (Special Provision VII.C.3.a).** The General Order will authorize numerous types of discharges which present no or minimal threat to water quality and beneficial uses of receiving

waters. Although the General Order establishes some WQBELs, the development and implementation of a BMP/PP Plan by each authorized Permittee is necessary to assure that the discharge(s) pose a low threat to water quality. The Regional Water Board has determined that implementation of BMPs in combination with effluent limitations is the most efficient manner in which to regulate and control such discharges.

As defined by NPDES regulations at 40 C.F.R. section 122.2, BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The inclusion of BMPs as requirements in discharge permits is authorized by CWA Section 304(e); and in accordance with NPDES regulations at 40 C.F.R. section 122.44(k), BMPs can be used to control or abate the discharge of pollutants in several circumstances, including, when numeric effluent limitations are infeasible.

Each applicant that requests coverage of a low threat discharge under the General Order must submit with its NOI, a BMP/PP Plan that identifies structural and nonstructural controls, schedules of activities, prohibited practices, maintenance procedures, and other management practices that will be implemented to prevent or reduce the discharge of pollutants and prevent impacts related to the discharge (e.g., erosion and scouring, adverse impacts on aquatic life, etc.).

The following table identifies the types of treatment and best management practices to address pollutants of concern by types of discharges. This table identifies practices that are commonly used but is by no means intended to be all-inclusive. Each Permittee will develop a detailed BMP/PP Plan for approval by the Executive Officer.

**Table F-6. Pollutants of Concern and Reasonably Foreseeable Treatment/Management Measures by Discharge Type**

Type of Discharge	Reasonably Foreseeable Treatment/Management Measures	Pollutants of Concern
Construction dewatering	<ul style="list-style-type: none"> <li>• Segregation of flow to prevent introduction of pollutants.</li> <li>• Sediment removal through settling or filtration basins.</li> <li>• Utilize measures such as vegetation, straw bales, silt fences, wattles, and/or sand/gravel bags to control flow rate or discharge to minimize erosion potential and prevent sediment transport.</li> <li>• Utilize storm drain inlet filters to capture some pollutants.</li> <li>• Eliminate source of petroleum hydrocarbons.</li> <li>• No surface water discharge allowed if petroleum hydrocarbons are present or if naturally occurring metals concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Turbidity</li> <li>• Construction materials</li> <li>• Total petroleum hydrocarbons</li> <li>• Naturally occurring metals<sup>1</sup></li> <li>• High temperature</li> </ul>
Discharges from maintenance, disinfection, and repair of water of water supply structures (e.g., wells, pipelines, tanks, reservoirs) <sup>2</sup>	<ul style="list-style-type: none"> <li>• Dechlorinate water (if chlorine has been used) using aeration and/or sodium thiosulfate and/or other appropriate means.</li> <li>• Settling and/or filtration as necessary to remove sediments, scale, rust, corrosion products.</li> <li>• Utilize measures such as vegetation, straw bales, silt fences, wattles, and/or sand/gravel bags to control flow rate of discharge to minimize erosion potential and prevent sediment transport.</li> <li>• Utilize instream diffuser, if necessary, to prevent instream erosion.</li> <li>• No surface water discharge allowed if metals or trihalomethane concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Chlorine and associated trihalomethanes</li> <li>• Metals<sup>3</sup></li> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Minor adhesives</li> <li>• Scale, rust, corrosion products</li> </ul>

Type of Discharge	Reasonably Foreseeable Treatment/Management Measures	Pollutants of Concern
Well installation, development, test pumping and/or purging <sup>2</sup>	<ul style="list-style-type: none"> <li>• Dechlorinate water (if chlorine has been used) using aeration and/or sodium thiosulfate and/or other appropriate means.</li> <li>• Sediment removal is discharge through settling or filtration basins.</li> <li>• Utilize measures such as vegetation, straw bales, silt fences, wattles, and/or sand/gravel bags to control flow rate of discharge to minimize erosion potential and prevent sediment transport.</li> <li>• Utilize instream diffuser, if necessary, to prevent instream erosion.</li> <li>• No surface water discharge allowed if naturally occurring metals concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Chlorine and associated trihalomethanes</li> <li>• Naturally occurring metals<sup>1</sup></li> <li>• Glues (volatile organic hydrocarbons)</li> </ul>
Hydrostatic testing of new pipelines, tanks, reservoirs, etc., used for purposes other than potable water supply <sup>2</sup>	<ul style="list-style-type: none"> <li>• Eliminate source of petroleum hydrocarbons.</li> <li>• Settling and/or filtration as necessary to capture scale, rust, corrosion products.</li> <li>• No surface water discharge allowed if petroleum hydrocarbons are present or if naturally occurring metals concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Scale and corrosion products</li> <li>• Total petroleum hydrocarbons</li> <li>• High Temperature</li> <li>• Metals</li> </ul>
Geothermal well testing	<ul style="list-style-type: none"> <li>• Settling and/or filtration to remove sediment.</li> <li>• Cooling to address high temperature.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• High temperature</li> <li>• Metals</li> </ul>
Subterranean seepage dewatering (e.g., dewatering of structures situated below ground level such as basements, roadways, etc.)	<ul style="list-style-type: none"> <li>• Segregation of flow to prevent introduction of pollutants.</li> <li>• Sediment removal through settling or filtration basins.</li> <li>• Control discharge flow rate to minimize erosion potential.</li> <li>• No surface water discharge allowed if petroleum hydrocarbons are present or if naturally occurring metals concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Total dissolved solids</li> <li>• Petroleum hydrocarbons</li> <li>• Naturally occurring metals</li> <li>• Low dissolved oxygen</li> </ul>

Type of Discharge	Reasonably Foreseeable Treatment/Management Measures	Pollutants of Concern
Dewatering of dredge spoils	<ul style="list-style-type: none"> <li>• Settling and/or filtration to remove sediment/turbidity from discharge.</li> <li>• No surface water discharge allowed if petroleum hydrocarbons are present or if naturally occurring metals concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Sediments</li> <li>• Turbidity</li> <li>• Nutrients</li> <li>• Naturally occurring metals<sup>3</sup></li> <li>• Petroleum hydrocarbons</li> <li>• Grease and oil</li> </ul>
Cooling Tower water (non-contact only)	<ul style="list-style-type: none"> <li>• Settling and/or filtration as necessary to capture scale, rust, corrosion products.</li> <li>• No surface water discharge allowed if biocides or biofilm are present.</li> </ul>	<ul style="list-style-type: none"> <li>• Scale and corrosion products (e.g., chromium)</li> <li>• Biocides</li> <li>• Biofilm</li> <li>• Concentrated minerals and metal ions (e.g., iron, manganese)</li> </ul>
Condensate water (from refrigeration and air-conditioning systems, compressors, etc.)	<ul style="list-style-type: none"> <li>• Eliminate source of petroleum hydrocarbons.</li> <li>• No surface water discharge allowed if petroleum hydrocarbons are present.</li> </ul>	<ul style="list-style-type: none"> <li>• Petroleum hydrocarbons</li> <li>• Semi-volatile compounds</li> <li>• Concentrated minerals and suspended matter</li> </ul>
Seafood rinse water	<ul style="list-style-type: none"> <li>• Dechlorinate water, if necessary.</li> <li>• Filtration to remove solids.</li> <li>• No surface water discharge allowed if copper concentrations exceed applicable water quality objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Biochemical oxygen demand</li> <li>• Nutrients</li> <li>• Residual chlorine</li> <li>• Pathogenic organisms</li> <li>• Metals (e.g., copper from pipe surfaces)</li> </ul>
Desalination brine	<ul style="list-style-type: none"> <li>• Filtration to reduce total suspended solids and turbidity.</li> <li>• Pretreatment to remove additives (antiscalants, coagulants, membrane preservatives).</li> <li>• Dilution through proper outfall design.</li> </ul>	<ul style="list-style-type: none"> <li>• Concentrated salts</li> <li>• Antiscalants (polyphosphates, polymers)</li> <li>• Coagulants (ferric sulfate, ferric chloride,)</li> <li>• Membrane preservative (sodium bisulfite)</li> <li>• Cleaning solutions – organic and inorganic</li> <li>• Total suspended solids</li> <li>• Turbidity</li> </ul>



### **A. Effluent Monitoring**

The MRP establishes the following effluent monitoring requirements for discharges authorized under the General Order.

1. The duration of low threat discharges covered by this General Order can range widely from short-term, low-volume discharges to continuous, high-volume discharges. Consequently, Table E-3 of this General Order includes tiered monitoring frequencies based on discharge duration to assure that an appropriate number of samples are collected to characterize each discharge. The sampling requirements have been modified from Order No. R1-2015-0003 to remove monitoring within the first 10 minutes of the discharge for discharges 24 hours to greater than 30 days in duration, remove monitoring within the next 50 minutes for discharges 60 minutes to 24 hours in duration and discharges 7 days to 30 or more days in duration, and to remove monitoring within the last 10 minutes of discharges 24 hours to 7 days in duration.
2. Effluent monitoring is required to assess compliance with the Effluent Limitations. Effluent monitoring frequencies and sample types for flow, TSS, settleable solids, grease and oil, petroleum hydrocarbons, volatile halogenated compounds, ethylbenzene, benzene, toluene, xylene, total coliform bacteria, pH, temperature, dissolved oxygen, turbidity, residual chlorine, and specific conductance at Monitoring Location EFF-001, EFF-002, etc. have been retained from General Order No. R1-2015-0003 with a slight modification to the discharge monitoring frequencies for total coliform bacteria, pH, temperature, dissolved oxygen, turbidity, residual chlorine, and specific conductance as discussed in section VIII.A.1.
3. This General Order contains new monthly effluent monitoring requirements for total dissolved solids in order to assess compliance with the total dissolved solids effluent limitations for waters with water quality objectives for total dissolved solids listed in Table 3-1 of the Basin Plan.
4. This General Order contains new effluent monitoring requirements, at frequencies outlined in Table E-3 of the MRP, for fecal coliform bacteria, *E. coli*, and Enterococci. These monitoring requirements are established to verify that the discharge is protective of the water contact recreation use, consistent with the bacteria objectives in the 2019 Ocean Plan.

### **B. Whole Effluent Toxicity Testing Requirements – Not Applicable**

Due to the low threat nature of discharges authorized under the General Order, whole effluent toxicity monitoring requirements are not required by the General Order and therefore no monitoring requirements for whole effluent toxicity are established in the MRP in Attachment E.

### **C. Receiving Water Monitoring**

#### **1. Surface Water**

##### **a. Monitoring Locations RSW-001 and RSW-002 – Applicable to Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries**

- i. Receiving water monitoring is required to assess potential impacts to receiving waters and to demonstrate compliance with the Receiving Water Limitations. Monitoring requirements at Monitoring Locations RSW-001 and RSW-002 for flow, pH, temperature, dissolved oxygen, turbidity, and specific conductance have

been retained from General Order No. R1-2015-0003, with a slight modification to the discharge monitoring frequencies for pH, temperature, dissolved oxygen, turbidity, and specific conductance as discussed in section VIII.A.1.

**2. Groundwater**

This General Order does not require groundwater monitoring at this time.

**D. Other Monitoring Requirements**

- 1. Visual Monitoring.** Visual monitoring requirements for the effluent (Monitoring Locations EFF-001, EFF-002, etc.) and the receiving water (Monitoring Locations RSW-001 and RSW-002) have been retained from General Order No. R1-2015-0003 to evaluate the effectiveness of BMPs at preventing erosion and scouring and nuisance conditions, and to ensure compliance with receiving water limitations in section VI of this General Order.
- 2. Other Monitoring.** Other monitoring requirements for the effluent (Monitoring Locations EFF-001, EFF-002, etc.) and the receiving water (Monitoring Locations RSW-001 and RSW-002) have been retained from General Order No. R1-2015-0003. When authorization to discharge under the General Order is granted, the Regional Water Board may establish monitoring requirements for a specific Permittee, in addition to those established by the General Order for all authorized discharges. It is not the intent of Regional Water Board staff to design a monitoring plan for each Permittee. In fact, such “individualization” of monitoring requirements defeats, to some extent, the purpose of a General Order, which is to ease the administrative burden of regulating a large number of similar Permittees. The Regional Water Board does want to retain, however, the discretion to require supplemental monitoring for a specific Permittee, if site or discharge-specific conditions merit attention in addition to that provided by the General Order.
- 3. Spill Notification.** The MRP that is part of this General Order establishes requirements for reporting spills and unauthorized discharges.

**IX. PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) General Order for Low Threat Discharges to Surface Waters in the North Coast Region. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

**A. Notification of Interested Parties**

The Regional Water Board notified the Permittees 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 the following posting on the Regional Water Board’s Internet site at:  
[http://www.waterboards.ca.gov/northcoast/public\\_notices/public\\_hearings/npdes\\_permits\\_and\\_wdrs.shtml](http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml) on **December 13, 2019.**

**B. Written Comments**

Interested persons were invited to submit written comments concerning these tentative WDRs as provided through the notification process. Comments were due to the Regional Water Board Executive Office electronically via e-mail to [NorthCoast@waterboards.ca.gov](mailto:NorthCoast@waterboards.ca.gov) or on disk (CD or DCD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://www.waterboards.ca.gov/northcoast>.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **January 30, 2020**.

**C. Public Hearing**

The Regional Water Board held a public hearing on the draft WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **April 16, 2020**  
Time: 8:30 a.m. or as announced in the Regional Water Board's agenda  
Location: Regional Water Board Hearing Room  
5550 Skylane Boulevard, Suite A  
Santa Rosa, CA 95403

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/northcoast> where you can access the current agenda for changes in dates and locations.

**D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

For instruction on how to file a petition for review see [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

**E. Information and Copying**

Related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address identified in section IX.C, 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 Regional Water Board by calling (707) 576-2220.

**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 Regional Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Heaven Moore at [Heaven.Moore@waterboards.ca.gov](mailto:Heaven.Moore@waterboards.ca.gov) or (707) 576-2753.

**ATTACHMENT G – NOTICE OF TERMINATION  
 OF COVERAGE UNDER THE  
 GENERAL ORDER/WASTE DISCHARGE REQUIREMENTS FOR  
 LOW THREAT DISCHARGES TO SURFACE WATERS IN THE NORTH COAST REGION  
 NPDES PERMIT NO. CA0024902; ORDER NO. R1-2020-0006**

Pursuant to section II.C of the General Order, this Notice of Termination must be submitted to the Regional Water Board within 30 days following completion of a discharge, which was authorized by the General Order.

**I. OWNER/OPERATOR/SITE**

Owner:	Contact:	Phone:
Operator:	Contact:	Phone:
Site Name:	WDID No:	
Site Address:		
City:	County:	ZIP:

**II. START/END DATE**

Discharge Start Date:
Discharge End Date:

**III. REASON FOR TERMINATION**

	Y or N
a. The discharge authorized by the General Order has been permanently terminated.	
b. The discharge has been redirected to:	
1. A sanitary sewer system	
2. A land application	
3. Recycling (e.g., irrigation)	
4. Infiltration or evaporation ponds	
5. Other (describe)	

Order No. R1-2020-0006  
Low Threat Discharges to Surface Waters in the North Coast Region  
NPDES No. CAG024902

**IV. Certification**

I certify under penalty of law that the discharge(s) authorized under NPDES General Order No. CAG024902, at the site identified herein, has been permanently terminated. I understand that with the submittal of this Notice of Termination, the discharge(s) is no longer authorized; however the Owner/Operator shall remain responsible for any violations of the General Order tha toccurred during the period of discharge.

Name (print):	
Title:	Date:
Signature:	