TENTATIVE ORDER R2-2014-XXXX
NPDES No. CAG00xxxxx

GENERAL WASTE DISCHARGE REQUIREMENTS FOR:

Discharges of Water from Drinking Water Supply Distribution, Transmission, and Groundwater Systems

Table 1. Administrative Information

This Order was adopted on:	DATE
This Order shall become effective on:	October 1, 2014
This Order shall expire on:	September 30, 2019
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Quality Control Board (Regional Water Board) have classified the discharges under this general National Pollutant Discharge Elimination System (NPDES) permit (General Permit) as minor discharges based on the discharges' impact to receiving waters.	
To obtain coverage under this General Permit, a discharger shall submit a Notice of Intent (NOI) as shown in Attachment B and a filing fee equivalent to the first year's annual fee. If the NOI is complete, the Regional Water Board Executive Officer will issue an Authorization to Discharge.	
Authorized Dischargers that intend to continue discharging after the expiration date shall file a new NOI no later than April 4, 2019.	

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on the date indicated above.

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Bruce H. Wolfe**,** Executive Officer

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I. GENERAL PERMIT SCOPE

This Order is an NPDES general permit that authorizes discharges from "drinking water systems" consisting of drinking water distribution systems, transmission systems, and water supply and monitoring wells in a drinking water aquifer. Examples include, but are not limited to, pipelines, tanks, treated water reservoirs, hydrants, water supply wells, and other components dedicated to and supporting drinking water distribution, transmission, and well systems. Drinking water systems refer to systems that qualify as a "community water system" as defined in the California Health and Safety Code and wholesalers of water to community water systems. Community water systems provide drinking water for at least 15 service connections and at least 25 residents at least 60 days each year. Drinking water systems may be owned or operated by a public or private entity. For the purposes of this Order, the owners and operators of drinking water systems are known as water purveyors.

An owner or operator of an existing drinking water system must apply for coverage within 15 days of the effective date of this Order if it discharges to waters of the United States; other water purveyors may seek coverage at their option. The Fact Sheet (Attachment F) further specifies the scope of this Order.

A. Discharges Covered. This Order covers planned and unplanned discharges from drinking water systems to inland surface waters, enclosed bays, and estuaries in the San Francisco Bay Region, referred to hereafter for the purposes of this Order as "receiving waters." Such discharges may occur directly or indirectly through storm drain systems. Following are examples of covered discharges:

1. Planned Discharges.

a. Dewatering and flushing for maintenance;

b. Disinfection of water supply pipelines, tanks, and reservoirs;

c. Hydrostatic testing of water supply vessels, pipelines, and tanks;

d. Maintenance of fire hydrants and fire flow testing when conducted by a water purveyor (not a fire department);

e. Maintenance of other drinking water system assets; and

f. Installation, development, test pumping, purging, and sampling of wells in an unpolluted drinking water aquifer.

2. Unplanned Discharges.

a. System failures;

b. Accidents, such as a fire hydrant shearing in an auto collision;

c. Natural and man-made disasters, such as earthquakes, floods, and wildfires; and

d. System purges resulting from water system monitoring data that exceed the primary or secondary drinking water standards pursuant to the California Code of Regulations title 22, for parameters such as bacteria, metals, color, and taste.

e. Seepage from underdrains of water storage reservoirs that are not treated with copper-based herbicides.

B. Discharges Not Covered. This Order does not cover the following discharges that may occur from drinking water systems:

1. Discharges subject to the federal Water Transfer Rule (40 C.F.R. § 122.3[i]);

2. Discharges from a surface water treatment facility (these are covered under NPDES Permit No. CAG382001);

3. Discharges of polluted groundwater (see Provision IV.C, Discharge Prohibitions; a water purveyor may seek coverage for these discharges under NPDES Permit No. CAG912002 or an individual NPDES Permit);

4. Discharges from fire-fighting operations and fire flow testing when conducted by a fire department;

5. Discharge or combination of discharges occurring continuously or intermittently for more than 2,200 hours per year, except seepage from underdrains of water storage reservoirs that are not treated with copper-based herbicides.

6. Discharges to ocean waters;

7. Discharges to sanitary sewer systems;

8. Discharges to land;

9. Discharges of water treated with zinc orthophosphate containing zinc concentrations above the applicable zinc water quality objective; and

10. Discharges permitted under another NPDES permit.

II. FINDINGS

The Regional Water Board finds the following:

A. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA, and Water Code chapter 5.5, division 7 (commencing with § 13370). It serves as an NPDES permit for point source discharges from multiple locations within a system to surface waters, storm drains, and other conveyances leading to surface waters.

B. Background and Rationale for Requirements. The Fact Sheet (Attachment F) contains background information, findings, and rationale for the requirements of this Order, and is hereby incorporated into and constitutes findings for this Order. Attachments A through E are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. Discharge Prohibition IV.B implements State law only. Because the CWA does not require or authorize this provision, violations of this provision are not subject to the enforcement remedies available for NPDES violations.

D. Notification of Interested Parties. The Regional Water Board notified prospective Dischargers and interested agencies and persons of its intent to adopt this Order, and provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.

F. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this Order. The Fact Sheet provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that, to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Dischargers that obtain coverage under this Order shall comply with the requirements of this Order.

III. PERMIT COVERAGE AND APPLICATION REQUIREMENTS

A. Application. To obtain coverage under this Order, a Discharger shall submit the following to the Regional Water Board:

1. **Notice of Intent (NOI).** A Discharger shall submit a completed NOI form (see Attachment B) for its facilities and discharges.

2. **Filing Fee.** When submitting the NOI, a Discharger shall submit a fee equal to the first year's annual permit fee (see Cal. Code of Regs. tit. 23, § 2200).

3. **Certification.** A Discharger's duly authorized representative shall certify the NOI, and all reports and information submitted in support of the NOI, in accordance with Attachment D, Provision V.B.

B. Discharge Authorization. The Discharger shall comply with all applicable prohibitions, limitations, and provisions of this Order as of the effective date of any Authorization to Discharge.

C. Discharge Termination. The Executive Officer may terminate or revoke coverage under this Order, with cause, and require the Discharger to apply for an individual NPDES permit as set forth in 40 C.F.R. section 122.28(b)(3). Causes for termination include, but are not limited to, the following:

1. Violation of any term or condition of this Order;
2. Misrepresentation or failure to disclose all relevant facts in obtaining coverage under this Order; and
3. Change in any condition that requires either a temporary or permanent reduction or elimination of an authorized discharge.

The Discharger may revoke its NOI and terminate its coverage under this Order by sending a complete and signed Notice of Termination (Attachment C) to the Regional Water Board.

The Discharger must cease discharge pursuant to this Order upon termination of coverage.

D. Change in Ownership or Operator. The Discharger shall provide written notice to the Regional Water Board at least 30 days in advance of any change in ownership or operator. Authorization to Discharge shall terminate upon the effective date of any change in ownership or operator. The new owner or operator shall submit its own NOI and obtain a new Authorization to Discharge prior to discharging.

E. Permit Reissuance. This Order expires on the date indicated in page 1. If this Order is not resissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations section 122.6 and remain in full force and effect. If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain authorization as required by the new permit once issued.

IV. DISCHARGE PROHIBITIONS

A. Discharge at any location or in any manner different from that authorized in an Authorization to Discharge is prohibited.

B. Discharge that causes pollution, contamination, or nuisance as defined by Water Code section 13050 is prohibited.

C. Discharge of polluted groundwater from a water supply or monitoring well in a drinking water aquifer.

D. Discharge to any vernal pool that is habitat to endangered species is prohibited.

V. EFFLUENT LIMITATIONS

A. Best Management Practice—This Order requires that the Discharger use Best Management Practices required in Provision VII.C.4 and VII.C.5.

B. Chlorinated Water—The discharge of super-chlorinated water (water with an original total chlorine residual concentration greater than 4.0 milligrams per liter (mg/L)) of any volume or distance to receiving water, and any other chlorinated water (regardless of original total chlorine residual concentration) within 300 feet of a receiving water shall meet the following effluent limitation in Table 2, with compliance measured at EFF-001 through EFF-YYY as described in the attached Monitoring and Reporting Program (MRP) (see Attachment E). .

Table 2. Effluent Limitation

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous	Hourly Average[1]
Total Residual Chlorine	mg/L	---	---	---	---	0.019

Unit Abbreviations:

mg/L = milligrams per liter

Footnotes:

[1] This effluent limitation is below the limit of detection in standard test methods, as defined in the latest edition of Standard Methods for the Examination of Water and Wastewater. The Discharger shall report compliance with the total residual chlorine effluent limitation in accordance with Provisions V.B.6 and V.B.7 of the MRP (Attachment E). Compliance is determined at the effluent limitation

concentration; however, the Discharger shall be deemed out of compliance with the effluent limitation if the total chlorine concentration in the monitoring sample is equal to or greater than the minimum level (ML). The ML for total chlorine residual shall be 0.13 mg/L. The State Water Board is considering a statewide policy on chlorine residual. This Order may be amended to reflect any changes relating to total residual chlorine.

VI. RECEIVING WATER LIMITATIONS

A. Discharges shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Board as required by the CWA and regulations adopted thereunder.

B. Discharges shall not cause the following conditions to exist in receiving waters:

1. Erosion of a stream bank or streambed;

2. Floating, suspended, or deposited macroscopic particulate matter or foams;

3. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

4. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

5. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or

6. Toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

C. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to the discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU.

VII. PROVISIONS

A. Standard Provisions

The Discharger shall comply with all "Standard Provisions" in Attachment D, except for provision I.G, I.H, V.E, VII.A, and VII.B.

B. Monitoring and Reporting Provisions

The Discharger shall comply with the Monitoring and Reporting Program (MRP, Attachment E), and future revisions thereto, and applicable sampling and reporting requirements in Attachment D.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to, or will cease to have, adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised water quality objectives or total maximum daily loads (TMDLs) come into effect (whether Statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality objectives and wasteload allocations in the TMDLs. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally adopted water quality objectives or TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

c. If State Water Board precedential decisions, new policies, new laws, or new regulations are adopted.

d. If an administrative or judicial decision on a separate NPDES permit or waste discharge requirements addresses requirements similar to this discharge.

e. Or as otherwise authorized by law.

2. Planned Discharges From Chlorinated Reservoirs, Transmission Pipelines, and Other High Volume Sources

a. Notification - The Discharger shall notify the Regional Water Board at least 5 business days prior to any planned discharge from a reservoir or transmission pipeline, or prior to any planned discharge conducted on the same day or consecutive days that the Discharger expects may cumulatively meet the following flow and volume criteria, and flow into the same receiving water body:

i. Flow rate ≥ 250,000 gallons per day; or

ii. Total volume ≥ 500,000 gallons.

The notification shall describe the reason for the discharge, the manner in which the discharge will occur, and the schedule.

b. Erosion and Flood Control Plan - For each planned discharge event that meets the criteria in Provision VII. C.2.a. above, the Discharger shall prepare and implement a plan specific for each discharge with adequate control measures, such as decreasing discharge flow rate, to prevent erosion or flooding of the receiving water at the point of discharge and areas downstream of the discharge point. The Discharger shall keep the plan in its file, and make it available to the Executive Officer upon request.

3. Post-Discharge Notification and Reporting

The Discharger shall comply with the following post-discharge notification and reporting requirements based on whether a discharge results in an adverse water quality impact or a noncompliance with the Effluent Limitations in Provision V or Receiving Water Limitations in Provision IV of this Order. For the purposes of this Order, "adverse water quality impact"

is defined as causing or contributing to fish or wildlife mortality, stream bank erosion, or stream channel scour.

a. Notification

i. The Discharger shall notify CalOES as soon as possible and no later than eight hours after becoming aware of a discharge resulting in an adverse water quality impact. In lieu of contacting CalOES, the Discharger shall individually notify the following agencies: Regional Water Board, U.S. Fish and Wildlife Services, National Marine Fisheries Services, California Department of Fish and Wildlife, and California Department of Health.

ii. The Discharger shall notify the Regional Water Board as soon as possible and no later than 24 hours after becoming aware of a discharge resulting in noncompliance with the Effluent Limitations in Provision V or Receiving Water Limitations in Provision VI of this Order. The notification shall include the following information:

(a) Cause of the discharge and violation(s);

(b) Discharge location (street address, or latitude and longitude) and name of receiving water body;

(c) Discharge flow rate and total volume, with description of how flow and volume were measured or estimated;

(d) Discharge duration, including dates and times (in military time). If the discharge has not stopped, the Discharger shall report the anticipated time it is expected to continue;

(e) Time of field crew arrival to assess impacts and implement response and corrective actions;

(f) Corrective actions implemented;

(g) Available field observations verifying no adverse impacts to receiving water quality as a result of the discharge; and observations of receiving water flow conditions upstream of the discharge to compare to impacted area; and

(h) Available monitoring results.

b. Reporting

i. Five-Day Written Report. The Discharger shall submit a written report to the Regional Water Board within five business days after notifying CalOES of a discharge resulting in an adverse water quality impact under Provision VII.C.3.a.i or upon request by the Executive Officer on a case-by-case basis. The report shall include the following information, or if information is not available, then the Discharger shall explain why and present a schedule for providing the missing information:

(a) Cause of the discharge and instances of noncompliance with this Order;

(b) Discharge location (street address, or latitude and longitude) and name of receiving water;

(c) Discharge flow rate and total volume, with description of how flow and volume are measured or estimated;

(d) Discharge duration, including dates and times (in military time) (If the discharge has not stopped, the Discharger shall report the anticipated time it is expected to continue.);

(e) Time of field crew arrival to assess impacts and implement response and corrective actions;

(f) Corrective actions implemented;

(g) Adverse impacts observed;

(h) Monitoring results for the discharge and receiving water;

(i) Steps taken or planned to reduce, eliminate, and prevent reoccurrence;

(j) Photographs of site conditions before and after field crew response operations are completed;

(k) Proposed time schedule for corrective actions; and

(l) Justification if monitoring determined to be infeasible.

ii. Annual Self-Monitoring Reports. The Discharger shall report all discharges resulting in noncompliance with the Effluent Limitations in Provision V or the Receiving Water Limitations in Provision VI of this Order in annual self-monitoring reports in accordance with MRP Provision V.B. The Discharger shall also annually report discharge characteristics and monitoring results in accordance with the MRP Provisions III, IV and V.B):

4. Best Management Practices

The Discharger shall implement a Best Management Practices (BMP) Plan upon receiving an Authorization to Discharge. The Discharger may incorporate other plans and standard operating procedures by reference within the BMP Plan. The BMP Plan shall specify practices to minimize the frequency of discharges and to manage discharges to minimize or prevent impacts on receiving waters. The Discharger shall keep its BMP Plan at a location where it is readily accessible and available to its personnel and the Regional Water Board upon request. The BMP Plan shall contain the following elements:

a. Personnel. The BMP Plan shall specify appropriate personnel for effective implementation by providing the following:

i. duly authorized representative described in Attachment D, Provision V.B;

ii. management, administrative, and maintenance positions (with telephone numbers) and describe their roles and responsibilities for implementing the BMP Plan;

iii. lines of authority through an organization chart or similar document with a narrative explanation;

iv. persons or positions responsible for notifying and reporting to the Cal OES, Regional Water Board, and/or other agencies pursuant to Provision VII.C.3; and

v. measures to ensure that appropriate staff and contractor personnel receive training adequate to be aware of and effectively implement the BMP Plan. Staff and contractor personnel shall be trained at least annually.

b. Contingency and Emergency Response Planning. The BMP Plan shall identify contingency and emergency response measures for planned and unplanned discharges, including the following:

i. Notification and reporting procedures as described in Provisions VII.C.2.a, and VII.C.3.a-b;

ii. Contingency plans, including plans for the provision of alternate water supplies if necessary; and

iii. Emergency response procedures, including traffic and crowd control and other responses as necessary. (In emergencies, Dischargers will first protect human health and safety, and property.)

c. Routine Management Practices. The BMP Plan shall identify source control measures, operations and maintenance procedures, and other routine measures to prevent or reduce to the extent possible planned and unplanned discharges, including the following:

i. Program to maintain adequate chemical and other supplies, and necessary spare parts;

ii. Program to inspect and maintain system infrastructure so as to prevent leaks and breaks from pipelines, valves, tanks, and other equipment;

iii. Procedures to avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible;

iv. Procedures to divert a discharge or portion of the discharge away from waters of the United States and onto land whenever feasible;

v. Procedures to dechlorinate discharges before they reach waters of the United States, consistent with methods in the American Water Works Association (AWWA) Standard C655-09, *Field Dechlorination Manual* (AWWA, March 2, 2010);

vi. Procedures to appropriately select a dechlorination chemical based on factors such as source water quality pH, original chlorine residual concentration, flow rate, and chemical delivery method, as outlined in the AWWA *Field Dechlorination Manual*

and the *Guidance Manual for Disposal of Chlorinated Water* (Tikkanen et al., 2001. American Water Works Association Research Foundation, 2001).

vii. Procedures to remove additives used to treat specific conditions (e.g., biological growth, mineralization, corrosion) and for maintenance and construction activities (e.g., pipe disinfection, well rehabilitation, drilling slurries)

viii. Procedures to dispose of discharge-related wastes, such as analytical supply kit packaging and residual sediment in the flow pathway, to prevent migration of waste into receiving waters;

ix. Procedures to monitor effluent and receiving waters in accordance with the MRP (including methods for locating flow paths and discharge points to receiving waters [e.g., map sources, global positioning satellite coordinates]); and

x. Procedures to retain, for at least three years, field and equipment calibration logs, field monitoring data sheets, checklists, training logs and other documentation used to track BMP Plan implementation.

d. Sediment and Erosion Control. The BMP Plan shall identify sediment and erosion control BMPs that assess and prevent potential impacts to receiving waters, such as creeks, at discharge points and downstream reaches. The Discharger may consult the following documents for guidance and examples for sediment and erosion control BMPs: *Water Utility Operation and Maintenance Discharge Model Pollution Prevention Plan* (Santa Clara Urban Runoff Pollution Prevention Program, January 20, 2011) and *Erosion and Sediment Field Manual* (California Regional Water Quality Control Board, San Francisco Bay Region, August 2002, 4th edition); or others with comparable guidance.

i. Receiving Waters. The Discharger shall identify methods for locating discharge points and receiving waters to determine appropriate sediment and erosion control measures.

ii. Sediment Control. Sediment control practices shall be used to filter and trap sediment particles to prevent them from reaching storm drains or receiving waters. The following practices may be used to control sedimentation in receiving waters:

(a) Straw waddles and gravel bags may be placed in a flow pathway and around storm drain inlets;

(b) Plastic sheets may be used to line a trench and flow pathway to prevent water contact with soil;

(c) Check dams may be constructed to dissipate flow energy and minimize the potential for discharges to dislodge soil; and

(d) A stormwater swale, if available nearby to the point of discharge, that has sufficient capacity for the discharge.

iii. 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 in receiving waters:

(a) Construct check dams to slow down the flow;

(b) Install flow diffusers at discharge point;

(c) Fashion discharge flow path with as little slope as possible; and

(d) Decrease discharge flow rates and duration.

e. Copper Management. A Discharger that applies copper-based herbicides to its water shall identify in its BMP Plan measures to eliminate or reduce copper discharges to the extent feasible, including the following:

i. Measures to maintain records of where, when, and how much copper-based herbicide is used to treat water that could be discharged.

ii. Procedures to eliminate or reduce, to the extent feasible, the use of copper-based herbicides by using less toxic methods for algal bloom control and reducing copper-based herbicide use to the lowest effective dose;

iii. Procedures that eliminate planned discharges within 48 hours of applying copper-based herbicides to water to be discharged; and

iv. Procedures that avoid, to the extent feasible, any unplanned discharges within 48 hours of applying copper-based herbicides to water to be discharged.

These copper management BMPs above are not required when discharges do not contain copper concentrations above water quality criteria more frequently than once every three years at any one location or when discharges flow back into the same water body where the water originated. In such cases, the Discharger shall explain the circumstances in the BMP Plan.

5. BMP Plan Evaluation and Improvement

a. BMP Plan Audit

The Discharger shall audit its BMP Plan at least once per permit cycle and submit a summary of the audit by March 1, 2019, to the Regional Water Board with the annual self-monitoring report required in the MRP for that year. Audits shall be appropriate for the size of the system and the number and volume of discharges. They shall focus on evaluating the effectiveness of BMP Plan implementation, identifying any deficiencies in the BMP Plan or its implementation, and proposing steps to correct deficiencies.

Detailed audit results shall be kept on file and, and shall be made available to the Executive Officer upon request.

b. BMP Evaluation

i. The Discharger shall visually inspect BMPs in place, at least once during the duration of a discharge, to ensure adequate BMP operation and performance. If feasible, the Discharger shall immediately correct any deficiencies noted by adding or changing BMPs.

ii. The Discharger shall evaluate the BMPs used in each case of non-compliance with the Effluent Limitations in Provision V or the Receiving Water Limitations in Provision VI of this Order and determine improvements to minimize the potential for additional non-compliance. The Discharger shall incorporate such improvements in its BMP Plan and implement the improvements when applicable in future discharges.

iii. The Discharger shall evaluate BMP implementation for sedimentation and erosion controls by appropriate monitoring and then comparing turbidity monitoring data from trench dewatering and water supply well operations for all discharges equal to or greater than 15,000 gallons and within 300 feet of a receiving water with the turbidity action level below:

Turbidity Action Level = 500 NTU (1-hour average)

The Discharger shall immediately respond to any exceedance of the turbidity action level by adding or changing BMPs to increase sediment removal (and decrease flow velocity as necessary). Dischargers shall note any additional or changed BMPs when recording the turbidity results on field data sheets. Turbidity monitoring data shall be kept on file and made available to the Executive Officer upon request.

(1) If 5 percent or more of a Discharger's monitoring events in a year show exceedance of the turbidity action level, the Discharger shall review its BMPs with its staff to ensure that the BMPs are diligently implemented.

(2) If 20 percent or more of a Discharger's monitoring events in a year show exceedance of the action level, the Discharger shall enhance its BMPs for the coming year. The Discharger shall update its BMPs Plan to incorporate all technically and economically-achievable control measures.

c. A summary of modifications to the BMP Plan in accordance with (i) through (iii) above shall be submitted to the Regional Water Board with the annual self-monitoring report required in the MRP.

d. In subsequent years after first implementing control measures identified in Provision VII.C.4.c and 4.d, if further BMP enhancement is infeasible, the Discharger shall explain its circumstances and justify not enhancing its BMPs in the audit summary report required in 5.a above.

6. Biologist Certification

If a discharge results in an adverse water quality impact, the Discharger shall provide a certification by a qualified biologist, after the discharge is over, that the receiving water beneficial uses are no longer actively being impacted, or have been restored. The biologist's certification shall be included in the Discharger's Five-Day Written Report, or shall be

submitted as soon as feasible, but no later than 30 days after determination that the beneficial uses have been are no longer actively being impacted, or have been restored. A qualified biologist is a person with professional expertise and a college degree or equivalent specializing in zoology, wildlife management, botany, marine biology, fisheries, or related field; or who is currently certified by a professional organization in this field, such as the American Fisheries Society, or California Wildlife Society.

ATTACHMENT A – DEFINITIONS

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

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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

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

Batch Treatment
Treatment process in which water flow is neither entering nor leaving a containment structure during treatment, and the contents are generally well mixed, until a later time after completion of treatment.

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

Carcinogenic
Known to cause cancer in living organisms.

Coefficient of Variation
Measure of data variability calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Community Water System
A system for the provision of water for human consumption through pipes or other constructed conveyances that has at least 15 service connections used by yearlong residents or regularly (i.e, at least 60 days per year) serves at least 25 yearlong residents of the area served by the system (California Health and Safety Code, section 116275).

Daily Discharge
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 is considered the result for the calendar day in which the 24-hour period ends.

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

Dilution Credit
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 by conducting a mixing zone study or modeling the discharge and receiving water.

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

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

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

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

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

Inline Treatment
Treatment process in which water flow is continuous or intermittently entering and exiting a treatment container, as with a plug flow process.

Instantaneous Maximum Effluent Limitation
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
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).

Maximum Daily Effluent Limitation (MDEL)
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
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 n/2 and n/2+1).

Method Detection Limit (MDL)
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 in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
Concentration at which the entire analytical system gives 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
Limited volume of receiving water allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

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

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. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Original Chlorine Total Residual Concentration
The concentration of total chlorine residual in a discharge before applying dechlorination best management practices to the discharge.

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

Pollutant Minimization Program
Program of 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 Pollutant Minimization Program is to reduce all potential sources of a priority pollutant 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. Cost effectiveness may be considered when establishing the requirements of a Pollutant Minimization Program. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), is considered to fulfill Pollutant Minimization Program 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 Water Board or Regional Water Board.

Receiving Water
For the purposes of this Order, a "receiving water" or "receiving water body" is an inland surface water, enclosed bay, or estuary.

Reporting Level (RL)
For the purposes of this Order, the RL is same as the minimum level (ML). The ML (and its associated analytical method) chosen by the Discharger 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 SIP Appendix 4 in accordance with SIP section 2.4.2 or established in accordance with SIP section 2.4.3. 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.

Source of Drinking Water
Any water designated as having a municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)
Measure of variability calculated as follows:

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

Superchlorinated Discharge
Discharge with original total chlorine residual concentration greater than 4.0 milligrams per liter.

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

ATTACHMENT B – NOTICE OF INTENT

NOTICE OF INTENT (NOI) to comply with the terms of the region-wide General National Pollutant Discharge Elimination System (NPDES) Permit authorizing discharges from drinking water systems to surface waters, storm drains, and other conveyances tributary to surface waters.

General Permit No. CAGXX2014
Order No. R2-2014-xxxx

I. FOR REGIONAL WATER BOARD USE ONLY

WDID: ECM ID No.:	Date NOI Received:	Date NOI Processed:
Case Manager's Name:	Fee Received*: $	Check No.:

* The annual fee will be based on the adopted fee schedule (available at http://www.waterboards.ca.gov/fees/docs/adoptedfeeschedule.pdf). The fee schedule is subject to change.

II. DISCHARGER TO PROVIDE THE FOLLOWING INFORMATION

OWNER/OPERATOR INFORMATION (Provide a separate form for each public water system based on the unique water system identification number assigned by the California Drinking Water Division for each system. If additional owners/operators are involved, provide the information in a supplemental letter for each owner and each operator.

A. OPERATOR (CONTRACT OPERATOR IF APPLICABLE)

Name			☐ Contract Operator
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:		Date:	

B. PURVEYOR/OWNER

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:		Date:	

C. BILLING ADDRESS

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			

Check here if additional owner information is attached.

D. LOCATION AND SITE MAPS

Attach a topographic map or maps of the area. Maps should clearly show the legal boundaries of the water service are and the location and names of any receiving water bodies within the service area (if water body is not named, indicate "no name").

E. WATER SYSTEM ASSETS

a. Linear feet of transmission system pipeline _____

b. Linear feet of distribution system pipeline _____

c. (i) Number of active production wells _____ (ii) Number of active monitoring wells _____

d. Number of treated water reservoirs _____

e. Number of pump stations _____

f. Number of hydrants _____

g. Number of service connections _____

h. Number of wholesale customers (if not applicable, indicate as "NA") _____

F. WATER QUALITY INFORMATION

1. Indicate water additives for chlorine residual or other Title 22 requirements such as for corrosion prevention (e.g., zinc orthophosphate, etc.) if applicable (attach extra pages to report other additives) :

Chorination _____ Choramination _____

Zinc orthopohosphate * _____ Other(s) _____

* Please see Fact Sheet section VI.I for additional information required with the NOI.

2. Median total chlorine residual concentration in distribution system (milligrams per liter): _____

G. FORESEEABLE MAJOR DISCHARGES

Provide a list and the anticipated schedule of foreseeable planned discharges with a flow rate of at least 250,000 gallons per day or 500,000 gallons or more through December of the next calendar year. Indicate facility type such as transmission pipeline; distribution pipeline; well; reservoir; or hydrant (anticipated discharges from a group of hydrants that are on the same water supply line may be reported as a hydrant group rather than reporting each hydrant individually). If the actual schedule is no known, indicate an estimated monthly or quarterly period in which the discharge may occur. Please attach additional sheets if necessary.

	Facility Type [1]	Discharge Location (latitude/longitude coordinates or nearest intersection)	Expected Schedule[2]	Purpose of Discharge	Expected Flow Rate (gallons per minute)	Approximate Total Volume per Discharge (gallons)
1						
2						
3						
4						

Check here if additional sheets are attached to describe foreseeable major discharges

H. AUTHORIZATION OF REPRESENTATION

This statement authorizes the named individual or any individual occupying the named position of the company/organization listed below to act as our representative to process the required NOI for coverage under the NPDES General Permit for discharges from the subject facility. The Company/Organization hereby agrees to comply with and be responsible for all the conditions specified in the General Permit.

Company/Organization Name:			☐ Contract Operator
Street Address			
City		State	Zip Code+4
Phone	Fax	Email	
Authorized Contact Person and Title			
Signature:		Date:	

A separate authorization statement is attached (check one): _____ Yes _____ No

I. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direct 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 directly responsible for gathering the information, the information submitted is, true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the criteria for eligibility and the development and implementation of Pollution Prevention Practices, if required, will be complied with.

Signature		Date
Printed Name and Title		
Company /Organization Name		
Phone	Fax	Email

J. APPLICATION FEE AND MAILING INSTRUCTIONS

Submit this NOI form with attachments and a check made out to the ―San Francisco Bay Regional Water Quality Control Board‖ with the appropriate fee (see http://www.waterboards.ca.gov/fees/docs/adoptedfeeschedule.pdf) to the following address:

San Francisco Bay Regional Water Quality Control Board
Attn: NPDES Wastewater Division
1515 Clay Street, Suite 1400
Oakland, CA 94612

ATTACHMENT C – NOTICE OF TERMINATION

General Permit No. CAG000xxx
Order No. R2-2014-xxxx

NOTICE OF TERMINATION (NOT) to request termination of coverage under region-wide General National Pollutant Discharge Elimination System (NPDES) Permit for discharges from drinking water systems to inland surface waters, bays, and estuaries. Send this notice to the responsible Regional Water Board staff member noted at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml.

A. Name and Location of Water System and Administrative Office Address

Water System Name			
ECM Identification Number *(NOTE: ECM ID Number is shown in the Authorization to Discharge Letter)*			
Contact Person			Email
City	State	ZIP	Phone
Administrative Office Location If Different from Water System Address			
City	State	ZIP	Phone

B. Reason For Termination (check all that apply)

1	Change of ownership—Original owner must submit a Notice of Termination at least 30 days in advance of any change in ownership or operation.	
2	This system is not a community water system or a wholesaler to a community water system as described in the General Permit Findings.	
3	This system does not discharge to inland surface waters, bays, or estuaries.	
4	All discharges from this facility are regulated by an individual NPDES permit or a different general permit. Individual NPDES Permit No._____ General NPDES permit No._____	
5	Other reasons: Please attach additional sheets to explain other reason(s).	

C. Certification and Signature of Duly Authorized Representative

I certify under penalty of law that this notice is prepared under my direction or supervision and the effective termination date of this discharge is _____. I am aware that discharging without a discharge authorization is a violation of the Clean Water Act and Water Code.

Name (Print) _____ **Signature** _____

Title/Organization _____ **Date** _____

Note: The Executive Officer may modify this form at any time as needed.

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS —PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger 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).)

2. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants and with standards for sewage sludge use or disposal established under CWA section 405(d) 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 Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, 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 (40 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

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 Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger 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 Discharger 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. Approval. 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).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a 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 Discharger 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 Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 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 Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

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

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

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

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

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

II. STANDARD PROVISIONS—PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This 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 Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 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 results must be conducted according to test procedures under 40 C.F.R. part 136 or, in the case of sludge use or disposal, approved under 40 C.F.R. part 136 unless otherwise specified in 40 C.F.R. part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS—RECORDS

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

B. Records of monitoring information shall include the following:

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) the 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 Discharger (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 Discharger 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 this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this 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. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

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

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

3. 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).)

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

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

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order. (40 C.F.R. § 122.22(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 of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

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

4. Calculations for all limitations, which require averaging of measurements, shall use 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 Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger 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 Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 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 40 C.F.R. 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. (Alternatively, for an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1).) (40 C.F.R. § 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions—Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision—Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

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

VI. STANDARD PROVISIONS—ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this Order 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 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 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).)

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect Discharger that would be subject to CWA sections 301 or 306 if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 C.F.R. § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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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. Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. Dischargers shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. sections 122.62, 122.63, and 124.5.

B. Dischargers shall conduct all monitoring in accordance with Attachment D, section III using the analytical methods described in 40 CFR section 136 or equivalent test methods. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. section 136 and specified in this Order.

C. Dischargers shall conduct all monitoring in accordance with Water Code section 13176, which requires appropriate accreditation or certification pursuant to Health and Safety Code section 100825 et seq.

II. MONITORING LOCATIONS

Dischargers shall establish the following monitoring locations to demonstrate compliance with effluent limitations, discharge specifications, and other requirements in this Order. If more than one discharge event occurs within a day, Dischargers shall identify each event as EVENT-001 through EVENT-XXX. Dischargers shall designate monitoring events using the format "EVENT-XXX/EFF-YYY."

Table E-1. Monitoring Locations

Sample Location Type	Monitoring Location Name	Monitoring Location Description
Effluent	EFF-001 through EFF- YYY	A point in the discharge flow after BMP treatment and before it joins or is diluted by any other flows or the receiving water
Receiving water (river or creek)	RSW-001C through RSW-YYYC	At the point of confluence of the discharge and the receiving water
Receiving water (river or creek)	RSW-001U through RSW-YYYU	A point 50 feet upstream from the point of discharge or, if access is limited, the nearest accessible point to this location
Receiving water (river or creek)	RSW-001D through RSW-YYYD	A point 50 feet downstream from the point of discharge or, if access is limited, the nearest accessible point to this location
Receiving water (reservoir or bay)	RSW-001A through RSW-YYYA	A point where ambient conditions are not expected to be influenced by the discharge
Receiving water (reservoir or bay)	RSW-001R through RSW-YYYR	A point within 50 feet of the point of discharge or, if access is limited, the nearest accessible point to this location

III. EFFLUENT MONITORING

A. A Discharger shall collect and analyze effluent samples at Monitoring Location EFF-YYY according to the schedule in Table E-2 for all discharges that meet the following criteria:

1. Super-chlorinated discharge (original total residual chlorine concentration > 4.0 mg/L); or

2. Chlorinated discharge (original total residual chlorine concentration $\leq$ 4.0 mg/L) that is equal to or greater than 15,000 gallons and located within 300 feet of a receiving water; or

3. Non-chlorinated discharge that is equal to or greater than 15,000 gallons and within 300 feet of a receiving water from a trench dewatering operation, or a well in an unpolluted drinking water aquifer.

B. The Discharger shall measure the distance to a receiving water from the point of discharge to a point in the receiving water with flowing or ponded water. Receiving water does not include storm drains or other conveyances constructed specifically for stormwater. The Discharger may estimate the distance to a receiving water based on storm sewer system maps, geographic data (e.g., latitude and longitude coordinates, or the location of the nearest intersection) or the distance on a map with topographical features to estimate the most likely flow path downgradient of the discharge point.

C. The Discharger shall visually inspect BMPs in place for all discharges regardless of volume or distance to receiving water, at least once during the duration of a discharge, to ensure adequate BMP operation and performance. If feasible, the Discharger shall immediately correct any deficiencies noted by adding or changing BMPs. For all discharges, visual BMP inspection shall at a minimum consist of observing and recording discharge discoloration such as color or clarity after the discharge has been treated with BMPs and that the dechlorination BMPs are performing as intended.

D. A Discharger is not required to conduct effluent monitoring when it would be unsafe, such as at night, when visibility is low (e.g., fog), during severe weather, or when terrain conditions are unstable or steep. Sampling is also not required when it is infeasible to collect a representative sample. In all of these instances, the Discharger shall explain the circumstances in annual self-monitoring reports as required by Provision VII.C.3.b.ii of the Order or, if applicable, in five-day reports required by Provision VII.C.3.b.i of the Order.

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Sample Frequency		
			1	2	3
			Super-chlorinated Discharge *(Original Total Chlorine Residual Concentration >4.0 mg/L)*	**Chlorinated Discharge ≥ 15,000 gallons and within 300 feet of a receiving water body**	**Non-Chlorinated Groundwater Well Discharge ≥ 15,000 gallons and within 300 feet of a receiving water body**
Start Time and Date	Military time	--	Each occurrence	Each occurrence	Each occurrence
End Time and Date	Military time	--	Each occurrence	Each occurrence	Each occurrence
Volume	Gallon	Flow Meter or Estimate [1]	Each occurrence	Each occurrence	Each occurrence
Flow Rate	Gpm	Flow Meter or Estimate [1]	Every 15 minutes for the first 4 hours; then hourly thereafter	Hourly until steady flow[4] is achieved; once per 8 hours thereafter	Hourly until steady flow[3] is achieved; once per 8 hours thereafter
Total Residual Chlorine	mg/L	Grab	**Batch dechlorination procedures:** Once per discharge **Inline dechlorination procedures:** Every 15 minutes until steady flow[4] is achieved; then hourly thereafter for the duration of continuous discharge	**Batch dechlorination procedures:** Once per discharge **Inline dechlorination procedures:** Once during the first 15 minutes; then hourly for the first 8 hours, and once every 12 hours thereafter	Not applicable when discharge source has not been chlorinated
Turbidity	NTU	Grab	Required pursuant to Provision VII. C.5. b. of this Order when the discharge is equal to or greater than 15,000 gallons and within 300 feet of a receiving water and only for a discharge from a trench dewatering operation or from a well in unpolluted drinking water aquifer. Reporting shall be conducted in accordance with that provision.		

Unit Abbreviations:

gpm = gallons per minute
ºC = degrees Celsius
mg/L = milligrams per liter
s.u. = standard units
NTU = nephelometric turbidity units

Footnotes:

[1] When reporting the volume or flow rate based on an estimate, a Discharger shall indicate the method of estimation.

[2] "Steady state" means the flow rate is not changing.

IV. RECEIVING WATER MONITORING

A. A Discharger shall visually monitor the receiving water during the same discharge sampling event required in Table E-2. The Discharger shall monitor at Monitoring Locations RSW-YYYC, RSW-YYYU and RSW-YYYD, or RSW-YYYA and RSW-YYYR. A Discharger shall record visual observations listed in Table E-3. Photographic monitoring shall be conducted when a discharge results in adverse water quality impacts (fish or wildlife mortality; stream bank erosion; or stream channel scour).

B. A Discharger is not required to visually monitor the receiving water when it would be unsafe, such as at night, when visibility is low (e.g., fog), during severe weather, when terrain conditions are unstable or steep, or when access to property is denied. In all of these instances, a Discharger shall explain the circumstances in annual self-monitoring reports as required by Provision VII.C.3.b.ii of the Order or, if applicable, in the five-day reports required by Provision VII.C.3.b.i of the Order.

Table E-3. Receiving Water Monitoring Standard Observations

Parameter	Units	Sample Type [1]	Sampling Frequency [2]
Aquatic Life[3]	---	Visual	Each occurrence
Sedimentation/Erosion[4]	---	Visual	Each occurrence
Discoloration[5]	---	Visual	Each occurrence
Weather conditions [6]	---	---	Each occurrence

Footnotes:

[1] Visual observations shall include photographs for a discharge that results in adverse water quality impacts.

[2] Dischargers shall increase sampling frequency as necessary to characterize receiving water conditions.

[3] Record visual presence or absence of aquatic and/or wildlife; if known, provide estimated number of aquatic and/or wildlife mortalities.

[4] Record visual condition of stream channel banks and vegetation; record presence or absence of a visible turbidity plume.

[5] Describe clarity, color, source of discoloration (if known), and size of affected area of discoloration.

[6] Weather conditions such as recent precipitation.

V. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

Dischargers shall comply with all Standard Provisions (Attachments D) related to monitoring, reporting, and recordkeeping. Dischargers shall maintain records in a manner and at a location such that they are accessible to the Regional Water Board. Dischargers shall retain records longer during any unresolved litigation regarding discharges subject to this Order, or when required by the Executive Officer.

B. Annual Self-Monitoring Reports

Dischargers shall submit annual self-monitoring reports (SMRs) reports as follows:

a. Annual SMR Schedule. By March 1 each year, Dischargers shall submit SMRs covering the previous calendar year. The first SMR may cover only part of a calendar year if the Authorization to Discharge begins after January 1.

2. **Report Format.** Dischargers shall electronically submit SMRs in accordance with their Authorization to Discharge. If instructed to do so, Dischargers shall use the State Water Board's California Integrated Water Quality System (CIWQS) Web site (http://www.waterboards.ca.gov/ciwqs/index.html) or another database.

3. **Report Contents.** Annual SMRs shall contain applicable items described in Attachment D, sections V.B and V.C, and the items below (plus the information required by Provision VII.C.5.g and VII.C.5.h of the Order):

a. Cover letter that includes the following information:

i. Identification of any instances of non-compliance with any requirements of the Order or clear statement that there were no violations;

ii. General description of any instances of non-compliance, including cause and proposed corrective actions;

iii. Explanation for any monitoring determined to be infeasible for a particular discharge event for which this Order specifies monitoring; and

iv. Any claims for data invalidation. Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if a Discharger wishes to invalidate any measurement after submitted them in an SMR, the Discharger shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation (e.g., laboratory sheet, log entry, test results, etc.), and corrective actions taken or planned (with a time schedule for completion) to prevent recurrence of the sampling or measurement problem.

b. Brief discussion of performance and compliance. This summary shall include each parameter for which the Order specifies a limit or action level, the number of samples taken during the monitoring period, and the number of samples that exceeded a limit or action level.

d. Any corrective actions taken or planned, such as changes to equipment or operations that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve the performance and reliability of the Discharger's practices.

g. A tabular summary of discharge characteristics (volume, flow rate, duration, and cause), monitoring data, violations, and cause of violations for the following discharges:

i. Superchlorinated discharges;

ii. Chlorinated discharges that are equal to or greater than 15,000 gallons and located within 300 feet of a receiving water body;

iii. Discharges from trench dewatering operations, and well operations in unpolluted drinking water aquifers; and

iv. Non-chlorinated discharges, which are equal to or greater than 15,000 gallons and within 300 feet of a receiving water, from wells in unpolluted drinking water aquifers.

4. **Monitoring Periods.** Monitoring periods for all required monitoring shall be as set forth below unless otherwise specified.

Table E-4. Monitoring Periods

Sample Frequency	Monitoring Period Begins At…	Monitoring Period
Each occurrence	Moment of initial discharge [1]	Any representative time during each occurrence
Within first 15 minutes	Moment of initial discharge	Once during the first 15 minutes: :00 through :15, :16 through :29, :30 through :44, and :45 through :59
Every 15 minutes	Moment of initial discharge	Once during the first 15 minutes: :00 through :15, :16 through :29, :30 through :44, and :45 through :59
Hourly	Moment of initial discharge	Moment of initial discharge through moment one hour later, and every one-hour period thereafter based on moment of initial discharge
Every 4 hours	Moment of initial discharge	Moment of initial discharge through moment 4 hours later, and every 4-hour period thereafter based on moment of initial discharge
Every 8 hours	Moment of initial discharge	Moment of initial discharge through moment 8 hours later, and every 8-hour period thereafter based on moment of initial discharge
Every twelfth hour	Moment of initial discharge	Moment of initial discharge through moment 12 hours later, and every twelve-hour period thereafter based on moment of initial discharge

Footnotes:

[1] For an unplanned discharge event, the "moment of initial discharge" is the time the Discharger arrives onsite after becoming aware of the discharge event and after immediately deploying BMPs.

5. **RL and MDL Reporting.** Dischargers shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136. Dischargers shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

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

b. Sample results less than the RL, but greater than or equal to the laboratory or field instrument's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy

(+/- a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

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

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

6. Total Residual Chlorine Compliance and Reporting. Dischargers shall report compliance with the total chlorine residual effluent limitation as follows:

a. Dischargers shall calibrate and maintain total chlorine residual measurement instruments to reliably quantify values of 0.13 mg/L and greater. This shall be the ML for total chlorine residual. For the purposes of this Order, the ML is the reporting limit (RL).

b. When determining the hourly average total chlorine residual and more than one sample result is available, Dischargers 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, Dischargers shall compute the median in place of the arithmetic mean in accordance with the following procedure:

i. 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.

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

7. Compliance Determination. Compliance with effluent limitations shall be determined using sample reporting protocols defined above and in the Fact Sheet and Attachments D. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the minimum level (ML).

C. Report Submission

Dischargers shall submit annual SMRs by March 1 to the Regional Water Board, signed and certified as required by Attachment D section V.B. Unless directed otherwise (e.g., in the Authorization to Discharge), Dischargers shall send SMRs referencing this Order's permit number to the address listed below:

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: NPDES Wastewater Division

ATTACHMENT F – FACT SHEET

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Tables

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as its findings supporting the issuance of the Order.

I. BACKGROUND INFORMATION

A. Permit Information

1. This Order issues National Pollutant Discharge Elimination System (NPDES) Permit No. CAG00XXXX.

2. This Order authorizes discharges from drinking water distribution systems, transmission systems, and water supply and monitoring wells in drinking water aquifers. Owners or operators of drinking water distribution systems, transmission systems, or water supply and monitoring wells who apply for coverage under this Order and are granted an Authorization to Discharge are hereinafter called "Dischargers." For the purposes of this Order, references to "discharger" or "permittee" in applicable federal and State laws, regulations, plans, and policy are held to be equivalent to references to the Dischargers herein. About 200 entities within the San Francisco Bay Region may seek permit coverage under this Order.

B. Facilities Covered by this Order

This Order authorizes discharges from drinking water distribution systems, transmission systems, and water supply wells. Water supply wells with contamination that requires pretreatment to meet drinking water standards and potable water treatment plants are not covered under this Order and are subject to different permits (e.g., NPDES Permit Nos. CAG912002, CAG912004, and CAG382001).

This Order covers discharges from drinking water systems that qualify as a "community water system" as defined in the California Health and Safety Code and wholesalers of water to community water systems. Community water systems provide daily drinking water for at least 15 service connections and at least 25 residents at least 60 days each year. Such water systems must comply with the California Health and Safety Code; specifically, the California Code of Regulations titles 17 and 22. Title 17 ensures that water delivered by public water systems is wholesome and potable. Title 22 contains potable water standards, including the maximum contaminant levels (MCLs), and requires monitoring and reporting for surface water and groundwater drinking water sources.

1. Transmission Systems. Transmission systems are the pipes, pumps, canals, pump houses, and other components used to move water from the point of origin to storage reservoirs, treatment facilities, and distribution systems. Transmission systems do not have connections to serve end users. Pipes generally range in diameter from 24 inches to 90 inches. They may be aboveground or underground. Some facilities are open channels. The water in transmission systems may or may not meet standards for human consumption.

2. **Distribution Systems.** Distribution systems are the pipes and associated pumps, valves, hydrants, and other structure that carry potable water from treatment plants, wells, reservoirs, and transmission systems to end users. Distribution pipes generally range in diameter from 2 inches to 24 inches.

3. **Wells in Drinking Water Aquifers.** Water supply wells are installed in borings advanced into the ground to extract groundwater for use as drinking water. They are typically 12 inches to 36 inches in diameter. Monitoring wells are also in borings advanced into the ground to gage the depth to groundwater for aquifer management purposes such as water overdraft protection. In addition monitoring wells serve as access points to sample the aquifer to characterize the water quality and to detect contaminants such as bacteria before the contaminant reaches the water supply. Monitoring wells are typically 12 inches or less in diameter. Discharges from water supply and monitoring wells occur during well development, maintenance (including flushing), rehabilitation, and sampling. This Order covers discharges from wells in unpolluted drinking water aquifers.

C. Types of Discharges Covered by this Order

This Order covers discharges of water that is altered by chlorine, corrosion inhibiting agents, or algaecides. It also covers groundwater discharges from water supply and monitoring wells in unpolluted drinking water aquifers. The types of discharges this Order covers are categorized as follows:

1. **Potable Water.** Potable water (i.e., drinking water) is water that is safe for human consumption. Potable water is usually chlorinated to meet public health requirements in CCR title 22.

2. **Treated Water.** This category refers to water treated through chlorination but not deemed safe for consumption (i.e., it is not potable).

3. **Groundwater.** This Order covers discharges from water supply wells, and monitoring wells in unpolluted aquifers. Well discharges are rarely treated except for disinfection when bacteria monitoring do not meet CCR title 22 requirements.

D. Disinfection and Dechlorination

Disinfection processes typically involve chlorine:

1. **Chlorination.** Most Dischargers use chlorine to disinfect their water in accordance with California Code of Regulations title 22 or to control microbial growth that can lead to corrosion. Chlorine reacts with organic matter and pipe materials (such as iron); therefore, the total chlorine residual decreases following chlorine treatment, making a system vulnerable to bacterial regrowth. Dischargers manage chlorine concentrations by occasionally flushing water from dead end areas with fresh water that has a sufficient chlorine residual. Dischargers may also use booster stations to inject additional chlorine.

2. **Chloramination.** Chloramine forms when chlorine and ammonia combine. Some Dischargers prefer chloramine over chlorine. Chloramine's disinfection power is one hundredth that of free chlorine, but chloramine is also more stable, less reactive, and more persistent when released into the environment. Chloramine provides longer-lasting, more

reliable protection against bacterial regrowth. In addition, chloramine generates lower concentrations of disinfection byproducts, such as trihalomethanes.

3. **Superchlorination.** Super-chlorinated water has a total chlorine residual greater than 4.0 mg/L, and the concentration is typically closer to 200 mg/L. Superchlorination is necessary when disinfecting new facilities, when returning facilities to service after taking them offline, and when contamination is detected.

Common dechlorinating agents are sodium bisulfite, sodium thiosulfate, sodium ascorbate, and ascorbic acid. Chlorine removal effectiveness depends in part on chemical dose and contact time. During planned discharges, flows may be connected to devices that add dechlorinating chemicals prior to discharge. During unplanned discharges, dissolving pellets or mesh bags containing the dechlorination chemicals may be placed in the path of the flow.

E. Activities Covered by this Order

This Order covers planned and unplanned discharges, which occur daily throughout the region. These discharges are short-term or seasonal in nature (i.e., they last no more than 2,200 hours per year), except for discharges from the underdrain of treated water reservoirs. The following table illustrates the types of discharges this Order covers and their typical characteristics (it is not meant to be exhaustive):

Table F-1. Typical Characteristics of Potable Water Discharges

Facility and Discharge Category [1]	Planned or Unplanned	Flow Rate (gpm) [2]	Duration [2]	Frequency [2]	Total Residual Chlorine (mg/L) [2]
Transmission Systems					
Dewatering for new construction, maintenance, or inspection [3]	Planned	200 to 3,500	2 hours to 21 days	Once per year to 20 years	0.8 to 2.5
Disinfection (new construction)	Planned	200 to 1,350	2 hours to 14 days	Upon start-up	10 to 50
Maintenance or construction	Planned	50 to 200	2 to 4 minutes	Once per year to 20 years	0.8 to 2.5
Aqueduct dewatering	Planned	250 to 50,000	1 to 2 days	1 per 2 to 10 years	0.8 to 2.5
Disinfecting (new pipeline or storage facility after repair) [4]	Both	Up to 3,500	1 hour to 21 days	Upon initial use	25 to 200
Water pipeline breaks, pipeline diameter > 24 inches (includes trench dewatering)	Unplanned	5 to 3,500	30 minutes to multiple days		0.8 to 2.5
Storage Facilities					
Drain valve testing	Planned	5 to 300	60 to 120 minutes	Once per 5 to 10 years	0.8 to 2.5
Reservoir rehabilitation pipe flushing	Planned	Varies	Varies		0.8 to 2.5
Tank and reservoir draining for maintenance	Planned	200 to 1,350	1 to 14 days	2 per year to 1 per 5 years	0.8 to 2.5
Reservoir overflow	Unplanned	Varies	Varies	Varies	0.8 to 2.5
Distribution Systems					
Standpipe cleaning	Planned	500 to 2,000	1 to 2 days		0.8 to 2.5
Water meter field testing	Planned	50 to 1,000	30 to 60 minutes		0.8 to 2.5

Dead-end pumping	Both	200 to 2,000	30 minutes to 1 hour	4 to 12 per year	0.8 to 2.5
Line flushing through a hydrant	Both	700 to 1,600	≤10 to 60 minutes	1 to 3 per year per hydrant	0.8 to 2.5
Distribution system maintenance or pipe breaks, pipeline diameter < 24 inches (includes trench dewatering)	Both	5 to 1,350	10 to 60 minutes		0.8 to 2.5
Water quality management and water quality sampling (e.g., for bacteria; metals; taste; odor; etc.)	Both	100 to 15,000	5 minutes to several hours	1 to 50 (for management); up to 5,000+ events per year (for sampling)	0.8 to 2.5
Unauthorized hydrant opening	Unplanned	500 to 1,000	60 minutes to 8 hours		0.8 to 2.5
Groundwater Well Operations					
Water supply well development	Planned	500 to 5,000	15 to 40 hours	Upon start-up	0
Water supply well rehabilitations	Planned	500 to 3,500	7days	As-needed; up to 4 per year	0
Monitoring well sampling	Planned	15-60	20 minutes to 3 hours per well	Semi-annual or as needed	0
Water supply well disinfection		500 to 3,500	30 minutes to 24 hours	As needed	≤200
Monitoring well development	Planned	15-60	3-8 hours	Semi-annual or as needed	0
Discharge by water supply well ("blow-off") for reactivation or monitoring	Both	500 to 3,500	30 minutes to 24 hours	Up to 4 per year (planned); or more frequently for unplanned circumstances	0

Unit Abbreviations:

gpm = gallons per minute

mg/L = milligrams per liter

Footnotes:

[1] Source: Tikkanen, Maria, John Schroeter, Lawrence Y.C. Leong, and Rajagopalon Ganesh, 2001. Guidance Manual for the Disposal of Chlorinated Water. Denver, CO. AWWA Research Foundation and American Water Works Association; with modifications by the Alameda County Water District, Alameda County and San Jose Water Company, Santa Clara County, 2013.

[2] The data presented are typical ranges; actual conditions may vary outside of these ranges.

[3] This information does not apply to treated water.

[4] The processes to disinfect water pipelines and storage facilities use different chlorination methods, which have different chlorine contact times. Chlorinated water is dechlorinated before discharge under planned operations.

1. **Maintenance and Repair.** Facility maintenance and repairs occur frequently (e.g., multiple times a day) at different locations. Discharges may be necessary for dewatering. Discharges may also be necessary to maintain positive water pressure during repair and replacement tasks to prevent sediment, debris, and microorganisms from entering the system.. Underground facilities require excavation for access, and dewatering is necessary to prevent flooding. The resulting "trench dewatering" discharges are usually turbid because the discharge velocity may be strong enough to dislodge and transport sediment from trenches and pits.

2. **System Flushing.** Flushing portions of a system may be necessary to replace old, stagnate water when demand is low or to remove poor quality water. Flushing may also be needed to respond to consumer complaints. Fire hydrants serve as access portals for flushing water distribution systems. Flushing can also occur from other valves or standpipe connections. Flushing may be part of routine operations, and can occur annually or more frequently based on seasonal water use or known water quality trends. Pipelines and water supply wells are periodically taken out of service for maintenance or in response to low water demands. Before reactivation, they must be flushed with super-chlorinated water.

3. **Pipeline, Tunnel, and Reservoir Drainage.** Occasionally, pipelines, tunnels, and reservoirs must be taken out of service for maintenance, such as inspections, repairs, and upgrades. Planned discharges may occur as often as once per year or as infrequently as once every 20 years. These facilities may also be drained in unplanned circumstances due to unanticipated water quality concerns.

4. **Groundwater Pumping.** The most common type of discharge from a drinking water well is well "blow-off" or purging water from the well. Well blow-off is required to reactivate a well after it has been out of service, to purge the system to collect a monitoring sample, or to purge the system when monitoring indicates that the water supply does not meet water quality requirements. Discharges from water supply wells also occur as a result of well maintenance, such as unclogging a filter screen from sediment and mineral build-up. This Order covers discharges from such activities after any slurry or other waste products from the well are removed and contained pursuant to waste management regulations and as long as the water source does not exceed water quality objectives or promulgated criteria. .

5. **Unplanned Discharges.** Unplanned discharges occur when pipelines or other infrastructure break or leak, valves malfunction, or other unanticipated events occur, such as noncompliance with drinking water standards or hydraulic releases necessary to prevent pipeline rupture. Unplanned discharges also result from emergency flushing necessary to respond to unanticipated water quality concerns. The cause of unplanned discharges is generally equipment failure or operator error; however, in rare instances, a catastrophic event, such as an earthquake, landslide, or other emergency, can result in an unplanned discharge. The frequencies of unplanned discharges vary widely. Based on 2012 data from San Francisco Region municipal stormwater permittees and data from a large water purveyor, the frequencies of unplanned discharges range from fewer than 25 per year for small systems (e.g., those serving fewer than 100,000 people) to over 3,000 per year for large systems (e.g., those serving over 1,000,000 people).

F. Discharge Points and Receiving Waters

Discharges flow directly into receiving waters or indirectly to receiving waters via storm drains and other conveyance systems. Discharges are located throughout the region, near creeks, rivers, lakes, enclosed bays, and estuaries. This Order does not cover discharges to ocean waters.

G. Prior Discharges Requirements

This Order issues a new permit, but other permits have addressed discharges similar to or the same as the discharges this Order covers:

1. **Municipal Regional Stormwater NPDES Permit (Order No. R2-2009-0074).** The Municipal Separate Stormwater Sewer System Regional Permit contains exemptions and conditional exemptions for certain non-stormwater discharges from the municipal permittees:

   - Pumped, unpolluted groundwater from drinking water aquifers; and
   - Planned, unplanned, and emergency discharges from the drinking water systems.

2. **Waste Discharge Requirements for the San Francisco Public Utilities Commission Drinking Water Transmission System (Order No. R2-2008-1012).** The San Francisco Public Utilities Commission's water system conveys water from the Sierra Nevada range to the San Francisco Bay Area. Order No. R2-2008-1012 covers the water transmission system discharges.

II. APPLICABLE PLANS, POLICIES, AND REGULATIONS

A. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA, and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges from drinking water distribution systems, transmission systems, and water supply wells to surface waters.

Regulations at 40 C.F.R. section 122.28(a)(2) allow general permits for discharges with any of the following characteristics:

- Involve the same or substantially similar types of operations,
- Discharge the same types of waste,
- Require the same effluent limitations,
- Require the same or similar monitoring, or
- Are more appropriately controlled under a general permit than under individual permits.

This general permit covers operations involving substantially similar types of drinking water operations, discharging the same types of wastes, requiring the same effluent limitations, and requiring the same monitoring. They are more appropriately controlled under a general permit than individual permits.

B. California Environmental Quality Act

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code division 13, chapter 3, commencing with § 21100). Compliance with the provisions of the California Environmental Quality Act is only required for NPDES permit actions pertaining to new sources as defined by the CWA (i.e., sources constructed after New Source Performance Standards were published). U.S. EPA has never published New Source Performance Standards for discharges from drinking water distribution systems, transmission systems, and water supply wells; therefore, these are not new sources as defined by the CWA.

This Order grants exception from meeting the priority pollutant objectives for copper, bromoform, chlorodibromomethane and dichlorobromethane as listed in Attachment 1 pursuant to Resolution No. R2-2008-0101 under the circumstances set forth therein. The Regional Water Board prepared and adopted an Initial Study/Mitigated Negative Declaration (MND) when it adopted Resolution No. R2-2008-0101, which this Order implements. The Regional Water Board has considered the MND in connection with this Order and finds that there is no substantial evidence that the project, as mitigated with the requirements set forth in Provisions VII.C. 2, 3, 4, 5 and 6, and the MRP of this Order, could have a significant effect on the environment (see Table F-3). The Regional Water Board further finds that no substantial changes are proposed in, or the circumstances under which, the project evaluated in the MND which will require major revisions to the MND due to the involvement of new significant effects or a substantial increase in the severity of previously identified effects. All feasible mitigation measures are required in this Order.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, this Order implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of the marine influence on San Francisco Bay and adjacent tidal waters, total dissolved solids levels exceed 3,000 mg/L in these areas; therefore, San Francisco Bay and adjacent tidal waters meet an exception to State Water Board Resolution No. 88-63. Beneficial uses applicable to inland surface waters in the San Francisco Bay Region are as follows:

Table F-2. Basin Plan Beneficial Uses

Receiving Waters	Beneficial Uses
Inland Surface Waters of the San Francisco Bay Region (marine, fresh, and estuarine)	Agricultural Supply (AGR) Cold Freshwater Habitat (COLD) Warm Freshwater Habitat (WARM) Freshwater Replenishment (FRSH) Ground water Recharge (GWR) Industrial Service Supply (IND) Industrial Process Supply (PRO) Marine Habitat (MAR) Municipal and Domestic Supply (MUN) Navigation (NAV) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Ocean, Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD) Preservation of Rare and Endangered Species (RARE) Fish Migration (MIGR) Fish Spawning (SPWN) Shellfish Harvesting (SHELL)

2. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. This Order implements the sediment quality objectives of this plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. These rules contain 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 U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated 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. Requirements of this Order implement the SIP.

5. **Resolution R2-2008-0101.** Resolution No. R2-2008-0101 allows exceptions to the SIP to be granted for the Basin Plan copper objectives and CTR bromoform, chlorodibromomethane, and dichlorobromomethane criteria for short-term or seasonal drinking water discharges necessary to fulfill statutory requirements under the federal Safe Drinking Water Act and California Health and Safety Code, and for draining water supply reservoirs, canals, and pipelines for maintenance. Such exceptions are based on SIP section 5.3. This Order complies with Resolution No. R2-2008-0101 in applying the SIP exceptions summarized in Table F-3.

   In addition, Table F-3 lists various provisions of this Order that incorporate mitigation measures called for in Resolution No. R2-2008-0101.

Table F-3. Permit Provisions Required for SIP Categorical Exceptions and Mitigated Negative Declaration of Resolution No. R2-2008-0101

State Implementation Policy (SIP) Requirements		
SIP Requirement for Granting of Categorical Exception	**Permit Provision**	**Permit Requirement**
5.3.2 Notification *"...notify potentially affected public and governmental agencies...*	Provisions VII.C.2 and VII.C.3	Requires notification to the Regional Water Board and notification to CalOES or resource agencies under certain circumstances.
5.3.2 (1) *A Description of the proposed action, including the proposed method of completing the action*	Provision VII.C.2	Requires description of major planned discharges.
	Fact Sheet section 1 and Table F-1	The Fact Sheet describes foreseeable discharges.
5.3.2(2) *A time schedule*	Provision VII.C.2	Requires submittal of a schedule for major planned discharges.
	Attachment F Fact Sheet sections I.C and I.E	These Fact Sheet sections describe typical discharge timing and frequencies.
5.3.2(3) *A discharge and receiving water monitoring plan...*	Attachment E Monitoring and Reporting Program (MRP)	Requires effluent and receiving water monitoring before, during, and after discharges.
5.3.2.(4) *CEQA Documentation*	--	The CEQA documentation consists of an Initial Study and Mitigated Negative Declaration prepared by the Regional Water Board as part of its Resolution No. R2-2008-0101.
5.3.2(5) *Contingency plans*	Provision VII.C.4.b	Requires Best Management Practices (BMP) Plans that contain contingency plans.
5.3.2(6) *Identification of alternate water supply (if needed)*	Provision VII.C.4.b	Requires BMP Plan to include measures to identify an alternate water supply if needed.
5.3.2(7) *Residual waste disposal plans*	Provision VII.C.4.c.vii	Requires removal of additives such as for biological growth, mineralization, corrosion, pipe disinfection, well rehabilitation, drilling slurries.
	Provision VII.C.4.c.viii	Requires disposal of discharge-related wastes, such as analytical supply kit packaging and residual sediment in the flow pathway, to prevent migration of waste into receiving waters.
5.3.2 Biologist Certification *"...certification by a qualified biologist that the receiving water beneficial uses have been restored."*	Provision VII.C.6	Requires certification by a qualified biologist that beneficial uses of receiving waters either have not been affected or that they are no longer being impacted, or have been restored.

R2-2008-0101 Mitigation Requirements[1]		
Resolution Number 7	**Permit Provision**	**Permit Requirement**
Best management practices (BMPs) that eliminate planned discharges and minimize unplanned discharges within 48 hours of applying copper-based herbicides to waterbodies	Provision VII.C.4.e.iii	Requires procedures that eliminate planned discharges within 48 hours of applying copper-based herbicides to water to be discharged.
BMPs that eliminate or reduce to the extent feasible the use of copper-based herbicides by using less toxic methods for controlling algal blooms and reducing the use of copper-based herbicides to the lowest effective dose	Provision VII.C.4.e	Requires BMPs that eliminate or reduce to the extent feasible the use of copper-based herbicides by using less toxic methods for controlling algal blooms and reducing the use of copper-based herbicides to the lowest effective dose.
Operational BMPs that avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible	Provision VII.C.4.c.iii	Requires operational BMPs that avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible.
Inspection and maintenance BMPs that minimize the number of discharges by preventing leaks and breaks from pipelines, valves, tanks, and other drinking water system infrastructure	Provision VII.C.4.c.iii	Requires inspection and maintenance BMPs that minimize the number of discharges by preventing leaks and breaks from pipelines, valves, tanks, and other drinking water system infrastructure.
Training BMPs that minimize the frequency of accidental spills	Provision VII.C.4.a.v	Requires training BMPs that minimize the frequency of accidental spills.
Annual submittal of a report documenting the review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented, and maintained, and providing additional BMPs where necessary to reduce impacts to less-than-significant	Attachment E Monitoring and Reporting Program (MRP)	Requires annual reporting.
	Provision VII.C.5	Requires summary of BMP improvements and changes to the BMP Plan during the annual cycle; and annual audit summarized once per permit cycle, with review and evaluation of all BMPs to determine whether they are adequate, properly implemented, and maintained; and an assessment of where additional BMPs are necessary.

Footnote:

[1] Although the mitigations adopted in Resolution No. R2-2008-0101 apply to use of copper-based herbicide, this Order also requires such BMPs to prevent toxicity from chlorinated discharges and sedimentation and erosion impacts.

6. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, which is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 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 be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This is a new general permit so there is no backsliding.

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

D. Impaired Waters on CWA 303(d) List

In October 2011, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources, and are established to achieve the water quality standards for the impaired waters.

Several water bodies in the San Francisco Bay Region are impaired by sedimentation and siltation. The Regional Water Board has adopted sediment TMDLs for Sonoma Creek and the Napa River. This Order includes requirements to minimize sediment in the discharges authorized.

III. RATIONALE FOR PERMIT COVERAGE AND APPLICATION REQUIREMENTS

These provisions specify how Dischargers are to obtain coverage under this general permit. Dischargers are to complete the Notice of Intent (NOI) form in Attachment B and submit a filing fee. Dischargers' duly authorized representatives must certify the NOI, and all reports and information submitted in support of the NOI, in accordance with Attachment D, Provision V.B. If the NOI is complete and the proposed discharge meets the requirements for coverage under this Order, the Executive Officer will issue an Authorization to Discharge. Dischargers must comply with all applicable prohibitions, limitations, and provisions of this Order as of the effective date of their Authorization to Discharge.

The Executive Officer may terminate or revoke coverage under this Order, with cause, and require a Discharger to apply for an individual NPDES permit. Dischargers may also revoke their NOIs and terminate their coverage under this Order. This Order will remain in effect for all Dischargers that submit a timely and complete NOI for continued Authorization to Discharge until the Regional Water Board reissues or rescinds this permit.

IV. RATIONALE FOR DISCHARGES NOT COVERED

Provisions I.B.1 through 10 include a list of discharges that may occur from drinking water systems but are not covered under this Order for the following reasons:

A. Discharges subject to the federal Water Transfer Rule. Planned water transfers (conveying or connecting waters of the United States without subjecting the water to intervening industrial, municipal, or commercial use) do not require NPDES permits as long as the water transfer activity introduces no pollutants (40 C.F.R. § 122.3[i]). Water purveyors transfer water routinely.

B. Discharges from a surface water treatment facility. These discharges are covered under NPDES Permit No. CAG382001, and may include pollutants from treatment chemicals and facility equipment not contemplated during development of the requirements of this Order.

C. Discharges of polluted groundwater. These discharges are likely to contain pollutants, such as volatile organic compounds (VOCs) or fuels, with reasonable potential to exceed water quality objectives or promulgated criteria. Water purveyors that discharge groundwater affected by such pollutants must apply for coverage under the General NPDES Permit No. CAG912002 or an individual NPDES permit.

D. Discharges from fire-fighting operations and fire flow testing when conducted by a fire department. This Order covers these discharges only when conducted by a water purveyor. Fire Departments may apply for coverage for such discharges under an individual NPDES permit.

E. Discharge or a combination of discharges occurring continuously or intermittently for more than a total of 2,200 hours per year. A discharge lasting longer than 2,200 hours per year is not covered by this Order except when it occurs from the underdrain of a drinking water storage reservoir that is not treated with copper-based herbicides.

The discharges covered must be "short term and seasonal" with the exception of discharges from the underdrains of treated water storage reservoirs that are not treated with copper-based herbicides. Resolution No. R2-2008-0101 defines a "short term or seasonal" discharge as any discharge or a combination of discharges occurring continuously or intermittently for no more than 2,200 hours per year (e.g., a single continuous discharge lasting up to 3 months of the year or intermittent discharges lasting up to 6 hours per day all year long).

A discharge from the underdrain of a reservoir not treated with copper-based herbicides and lasting longer than 2,200 hours can be covered under this Order because it does not have reasonable potential to exceed applicable water quality objectives, and thus does not need a SIP exception from the copper and trihalomethanes (THMs) criteria pursuant to Resolution No. R2-2008-0101. Reservoir underdrain discharges intermittently from cracks and seams in the concrete liner of a reservoir and can combine with unpolluted groundwater before reaching a receiving water body.

Furthermore, any THMs that may be present would attenuate as the discharge travels through soils and mix with unpolluted groundwater before it reaches a receiving water body. Moreover, based on data presented in Resolution No. R2-2008-0101, aquatic toxicity from THMs occurs at much higher concentrations (as low as 6,400 ug/L) than are likely in drinking water discharges (the drinking water standard for total THMs is 80 µg/L). Thus, a discharge from the underdrain of an treated water reservoir would pose less-than-significant water quality impacts and is not likely to exceed the THMs water quality objectives upon reaching a receiving water body.

F. Discharges to ocean waters. This Order does not consider the water quality objectives and requirements in the Water Quality Control Plan for Ocean Waters of California (California Ocean Plan). Thus, this Order does not cover direct discharges to ocean waters.

G. Discharges to sanitary sewer systems. This Order covers discharges to receiving waters so it does not apply to discharges to the sanitary sewer. When feasible, discharge to the sanitary sewer is preferred.

H. Discharges to land. This Order covers discharges to receiving waters so it does not apply to discharges to land. When feasible, discharge to land is preferred.

I. Discharges of water treated with zinc orthophosphate. The discharge of waters treated with zinc orthophosphate above applicable criteria would require zinc effluent limitations and additional controls not contemplated in the development of this Order. Zinc orthophosphate is used in some drinking water systems for corrosion control. These waters may contain zinc concentrations of about 200 to 600 µg/L, much higher than the CTR acute water quality criteria for the protection of aquatic life (120 µg/L at 100 mg/l hardness for freshwater and 90 µg/L for saltwater). These discharges would thus have reasonable potential for zinc in concentrations that exceed the applicable water quality objective thereby triggering SIP required limits and other provisions. As such, this Order cannot cover these discharges unless a water purveyor reduces its use of zinc orthophosphate to levels below the criteria.

If a water purveyor who uses zinc orthophosphate chooses to seek coverage under this Order, it must provide with its notice of intent adequate data and analysis to demonstrate that its discharges do not have a reasonable potential to exceed applicable zinc water quality objectives. These data must characterize zinc levels in its discharges and hardness levels in all anticipated receiving waters. The water purveyor must conduct the reasonable potential analysis in accordance with State Implementation Policy section 1.3. If the Executive Officer grants authorization to discharge, additional zinc monitoring may be required to verify no reasonable potential.

J. Discharges permitted under other NPDES permits. A Discharger would not need to seek coverage under this Order if its drinking water discharges are permitted under another NPDES permit provided that the other permit has requirements as stringent as, or more stringent than, this Order. This is because doing so would be an unnecessary duplication of regulation.

V. RATIONALE FOR DISCHARGE PROHIBITIONS

A. Prohibitions in This Order

1. Discharge Prohibition IV.A (No discharge other than as described in Authorization to Discharge): This prohibition is based on 40 C.F.R. section 122.21(a) and Water Code

section 13260, which require filing an application and Report of Waste Discharge before a discharge can occur. Discharges not described in an NOI (application) and subsequent Authorization to Discharge are prohibited.

2. **Discharge Prohibition IV.B (No pollution, contamination, or nuisance):** This prohibition is based on Water Code section 13050 and ensures protection of receiving waters from possible effects of pollution, contamination, or nuisance.

3. **Discharge Prohibition IV.C (No discharge of polluted groundwater from a drinking water aquifer):** The requirements of this Order are designed for potable water discharges that do not contain pollutants, such as volatile organic compounds (VOCs) or fuels. Owners or operators of drinking water systems affected by such pollutants may apply for coverage under General Permit No. CAG912002 or for an individual NPDES permit. This prohibition also applies to solids and slurries from well drilling and other water supply well operations that produce sediment and other pollutants that require special handling and disposal (e.g., landfill disposal). These solids and slurries contain pollutants necessitating treatment and control measures that were not considered in the development of this Order.

4. **Discharge Prohibition IV.D (No discharge to vernal pools):** Vernal pools support sensitive habitats that frequently harbor endemic or endangered species. This prohibition is necessary to protect these beneficial uses and is authorized by Water Code section 13243.

B. Basin Plan Discharge Prohibition 1

This Order provides an exception to Basin Plan Prohibition 1 (Basin Plan Table 4-1), which prohibits discharge of any wastewater that has particular constituents of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1. This Basin Plan prohibition is intended (a) to provide an added degree of protection from the continuous effects of waste discharge, (b) to provide a buffer against the effects of abnormal discharges caused by temporary upsets or malfunctions, (c) to minimize public contact with undiluted wastes, and (d) to reduce aesthetic impacts of waste discharges. The discharges under this Order are intermittent and of relatively short duration. The main pollutant of concern (total chlorine residual) is not bioaccumulative; therefore, there will be no continuous effects from the covered discharges. Other types of discharges (e.g., treated sewage) have treatment processes subject to upset, but because discharges covered by this Order are not associated with treatment facilities, they are not subject to malfunction or upset. As potable water, these discharges pose no risks from public contact.

The Basin Plan provides for an exception to Prohibition 1 when an inordinate burden would be placed on dischargers relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means. Because these discharges are scattered throughout the San Francisco Bay Region, ensuring that each occurs at a location where it can receive an initial dilution of at least 10:1 is infeasible and thus would be an undue burden. These discharges are required to comply with requirements of the federal Safe Drinking Water Act and the California Health and Safety Code. Prohibiting the discharges outright would unduly threaten the quality, reliability, and quantity of potable water available for distribution and use. Compliance with the Best Management Practices that Provision VII.C.4 requires will provide an equivalent level of protection.

VI. RATIONALE FOR EFFLUENT LIMITATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into 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: 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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters.

A. Technology-Based Effluent Limitations

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements at a minimum and any more stringent effluent limitations necessary to meet water quality standards. The CWA requires U.S. EPA to develop effluent limitations, guidelines, and standards (ELGs) representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS). CWA section 402(a)(1) and 40 C.F.R. section 125.3 authorize the use of Best Professional Judgment to derive technology-based effluent limitations on a case-by-case basis when ELGs are unavailable.

This Order does not establish technology-based effluent limitations because U.S. EPA has not established ELGs for the types of discharges this Order authorizes. Moreover, data necessary to develop technology-based effluent limitations on a case-by-case basis using Best Professional Judgment are unavailable. The technology-based effluent limitations in Basin Plan Table 4-2 do not apply because this Order does not cover treatment facility discharges.

B. Water Quality-Based Effluent Limitations

1. Scope and Authority

This Order contains water quality-based effluent limitations (WQBELs) that implement water quality objectives and criteria that protect beneficial uses. CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than federal technology-based requirements where necessary to achieve applicable water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a 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, 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 a narrative criterion, supplemented with relevant information (40 C.F.R. § 122.44[d][1][vi]). The process for determining reasonable potential and calculating WQBELs is intended to achieve applicable water quality objectives and criteria, and to protect designated beneficial uses of receiving waters.

2. Applicable Objectives and Criteria

This Order authorizes discharges to inland surface waters, enclosed bays, and estuaries within the San Francisco Bay Region. Beneficial uses of these receiving waters are listed in section II.C.1 of this Fact Sheet. The water quality objectives and criteria applicable to these receiving waters are contained in the Basin Plan, CTR, and NTR.

a. Receiving Water Salinity. Basin Plan section 4.6.2, the CTR, and the NTR state that the salinity characteristics (i.e., freshwater vs. saltwater) of a receiving water are to be considered in determining the applicable water quality objectives. Freshwater objectives apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater objectives apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to waters with salinities between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the applicable water quality objectives are the lower of the saltwater and freshwater objectives. Because the receiving waters for the discharges covered by this Order include inland marine, fresh, and estuarine waters, the requirements of this Order are based on the more stringent of the freshwater and saltwater objectives in the Basin Plan, NTR, and CTR.

b. Basin Plan Objectives. The Basin Plan specifies various narrative and numeric water quality objectives, including the MCLs in California Code of Regulations title 22. In accordance with Resolution R2-2008-0101, this Order grants exceptions to the Basin Plan's numeric copper objectives. The narrative objectives most relevant to this Order are listed below:

i. Toxicity. The Basin Plan's toxicity objective states, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." U.S. EPA water quality criteria were used to translate this objective with respect to chlorine. U.S. EPA's recommended 1-hour average acute criterion for chlorine is 0.019 mg/L and its 4-day average chronic criterion is 0.011 mg/L (the acute or chronic criteria are not to be exceeded more than once every three years on average in any single location).

ii. pH. The Basin Plan's pH objective states, "The pH shall not to be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters within the basin. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels."

iii. Sediment. The Basin Plan's sediment objective states, "The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses."

iv. Settleable Material. The Basin Plan's settleable material objective states, "Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses."

v. Suspended Material. The Basin Plan's suspended material objective states, "Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses."

vi. Turbidity. The Basin Plan's turbidity objective states, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU."

c. CTR Criteria. The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." The criteria applicable to "water and organisms" apply to many receiving waters subject to this Order because they are potential drinking water sources with the municipal and domestic supply (MUN) beneficial use. In accordance with Resolution R2-2008-0101, this Order grants exceptions to the CTR criteria for bromoform, chlorodibromomethane, and dichlorobromomethane.

d. NTR Criteria. The NTR establishes numeric aquatic life and human health criteria for a number of toxic pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta.

e. Sediment Quality Objectives. The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* contains a narrative water quality objective: "Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.

3. Need for WQBELs (Reasonable Potential Analysis)

Assessing whether a pollutant has reasonable potential to exceed a water quality objective or criterion is the fundamental step in determining whether a WQBEL is required. As explained below, this Order finds reasonable potential for toxicity (chlorine), sediment, settleable material, suspended material, and turbidity.

a. Analysis for Numeric Objectives and Promulgated Criteria. SIP section 1.3 sets forth the method used for this Order for assessing whether a pollutant has reasonable potential to exceed a numeric water quality objective or promulgated criterion. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

- **Trigger 1** is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective (MEC $\geq$ water quality objective).

- **Trigger 2** is activated if the ambient background concentration observed in the receiving water is greater than the water quality objective (B > water quality objective) *and* the pollutant is detected in any effluent sample.

- **Trigger 3** is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

To simplify this analysis, this Order relies on reasonable potential analyses conducted for potable water discharges similar in character to the discharges this Order covers.

i. Order No. R2-2009-0033 (Discharges from Surface Water Treatment Facilities for Potable Supply). The reasonable potential analysis for Order No. R2-2009-0033 relied on monitoring data from 18 discharges at various San Francisco Bay Region surface water treatment plants from 2005 to 2007. The analysis found reasonable potential for copper, bromoform, chlorodibromomethane, and bromodichloromethane based on Trigger 1, and zinc based on Trigger 3. Water Board staff recently updated the reasonable potential analysis for zinc with monitoring data collected from 2008 through 2012 by a water purveyor that uses zinc orthophosphate to prevent corrosion. The updated analysis found reasonable potential for zinc based on Trigger 1.

Because this Order grants exceptions to the SIP for the copper objectives and bromoform, chlorodibromomethane, and bromodichloromethane criteria (see section II.C.5 of this Fact Sheet), requirements consistent with the exceptions are in this Order in place of effluent limits for these pollutants. Also, because this Order prohibits the discharge of water treated with zinc orthophosphate (see Prohibition IV.E. of the Order), there is no reasonable potential for zinc.

ii. Order No. R2-2008-0102 (San Francisco Public Utilities Commission Drinking Water Transmission System). The reasonable potential analysis for Order No. R2-2008-0102 relied on monitoring data collected from the water transmission system from May 2002, 2003, and 2004, and July 2005 and 2006. The analysis found reasonable potential for nickel based on Trigger 2. Consideration of more recent nickel data collected from 2009 through 2012, and available hardness data, demonstrates that there is no longer reasonable potential for nickel.

The analysis also found reasonable potential for pH because the San Francisco Public Utilities Commission increases the pH of water to above 9.0 within its facility to prevent corrosion of pipelines, as required by California Code of Regulations title 22. Consideration of receiving water pH data collected from 2009 through 2013, demonstrates that discharges with pH values greater than 8.5, would not cause exceedances of the pH receiving water limitation. Specifically, out of twelve discharge events between 2009 and 2013, all except two events did not change the receiving water pH by more than 0.5 units. The two exceptions caused changes just slightly greater than 0.5, but the resulting pH was close to neutral (6.67 and 7.28) Thus, the discharge does not have reasonable potential for pH.

b. Analysis for Narrative Objectives. This Order finds reasonable potential for the following pollutants based on available information:

i. **Toxicity (Chlorine).** This Order translates the narrative toxicity objective with respect to chlorine by using U.S. EPA's water quality criteria for chlorine. Water distribution systems are usually chlorinated to meet the minimum total chlorine residual requirements in California Code of Regulations title 22. According to 2012 Annual Consumer Confidence Reports from various water agencies, the typical average total chlorine residual concentration in a distribution system is about 2.0 mg/L, which is roughly 100 times U.S. EPA's acute water quality criterion of 0.019 mg/L. However, chlorine in water discharges can dissipate from volatilization and reaction with dirt and organic matter on streets and storm drain systems. Based on the analysis in IV.B.4, below, reasonable potential for toxicity exists only for superchlorinated waters and other chlorinated waters that are in closer proximity to receiving waters (within 300 feet).

ii. **Sediment, Settleable Material, Suspended Material, and Turbidity.** Various discharges may contain sediment. Sediment accumulates at the dead ends of distribution systems during periods of low water demand. The sediment within a system must be flushed periodically. Raw water may contain sediment due to naturally occurring minerals and organic debris. Trench dewatering can result in relatively high sediment loads, depending on soil type, flow rate and duration, and excavation size. Rehabilitation of inactive wells may result in sediment discharges, and discharges from new well development may also have high sediment loads. After a well is drilled, drilling mud, cuttings, and loose sediment must be removed from the bottom of the well and around the screen.

Discharges can also contribute to sedimentation and erosion within receiving waters when discharge flows and volumes are high. Such discharges can dislodge sediment and transport it to receiving waters, or destabilize and erode shorelines or other natural receiving water features.

c. **Analysis for Sediment Quality.** Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. Owing to the relative clean nature of potable water, it is unlikely that these discharges would contribute to sediment toxicity. However, to date there is no evidence either way; therefore, the Regional Water Board cannot draw a definitive conclusion about reasonable potential for these discharges to cause or contribute to exceedances of the sediment quality objectives.

4. WQBELs

This Order contains WQBELs for pollutants with reasonable potential (i.e., chlorine, sediment, settleable material, suspended material, and turbidity). Regulations at 40 C.F.R. section 122.44(k)(3) require numeric WQBELs unless numeric WQBELs are infeasible. This Order contains narrative WQBELs for sediment, settleable material, suspended material, and turbidity as set forth in Provisions VI.C.4 and VII.C.5 of the Order. Narrative WQBELs are appropriate because there is no readily available means to translate the sediment, settleable material, suspended material, and turbidity objectives into numeric WQBELs appropriate for the many receiving waters that could be affected by the discharges covered by this Order.

This Order imposes numeric WQBELs for total residual chlorine because it is feasible to calculate numeric WQBELs for these pollutants. Also, field test kits are readily available to measure them, so it is feasible to collect representative total residual chlorine data (except under specific circumstances described in MRP sections III and IV).

The total chlorine residual WQBEL is 0.019 mg/L based on U.S. EPA's acute water quality criterion for chlorine, which is expressed as a one-hour average. The numeric WQBEL for total residual chlorine is applicable to the following discharges: (1) superchlorinated discharge, and (2) chlorinated discharge located within 300 feet of a receiving water body. These discharges pose a reasonable potential to cause exceedance of water quality objective for toxicity in the receiving water due to the elevated residual chlorine concentrations found in superchlorinated water and proximity to receiving waters.

According to a controlled field study conducted by East Bay Municipal Utilities District (EBMUD), when dechlorination BMPs are properly implemented, the total chlorine residual concentration in chlorinated discharges is fully neutralized within 200 feet to concentrations below a minimum level of 0.1 mg/L (Tikkanen et. al, 2001, *Guidance Manual for Disposal of Chlorinated Water*). The study analyzed samples from nine fire hydrants discharging at varying flow rates and treated with dechlorination BMPs within the EBMUD jurisdiction. Similarly, the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) analyzed samples from ten fire hydrants discharging at varying flow rates and treated with dechlorination BMPs in the Cities of Palo Alto, San Jose and Sunnyvale. Based on the SCVURPPP study, eight of the discharge events monitored achieved full neutralization (to concentrations below 0.1 mg/L) by 160 feet. The two remaining discharge events spiked above the minimum level of 0.1 mg/L, but ultimately achieved full neutralization within 425 feet. The spike in concentration was suspected to be due to turbidity interference.

Based on these data, the Regional Water Board has determined that discharges where dechlorination BMPs have been properly implemented that are more than 300 feet from a receiving water body do not pose a reasonable potential to exceed the applicable total residual chlorine water quality objective. Thus, the numeric WQBEL is not applicable to such discharges.

C. Effluent Limitation Considerations

1. **Anti-backsliding.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l) require effluent limitations in a reissued permit to be as stringent as those previously in effect. These anti-backsliding requirements do not apply to this Order because it issues a new NPDES permit.

2. **Antidegradation.** State Water Board Resolution No. 68-16 sets forth California's antidegradation policy. Consistent with 40 C.F.R section 131.12, Resolution No. 68-16 incorporates the federal antidegradation policy. Permitted discharges must be consistent with these policies.

   This Order covers existing discharges. According to a State Water Board guidance memorandum (William Attwater, Chief Counsel, October 7, 1987), "…the federal antidegradation policy ordinarily does not apply to consideration of existing discharges, even if exceptions or variances from other applicable water quality objectives or effluent guidelines are required to permit the discharge to continue." According to the memorandum,

considerations in determining whether to perform an antidegradation analysis include the following:

a. whether there are new discharges or an expansion of existing facilities,

b. whether there would be a reduction in the level of treatment of an existing discharge,

c. whether an existing outfall has been relocated,

d. whether there has been a substantial increase in mass emissions, and

e. whether there has been a change in water quality from a point source or non-point source discharge or water diversion.

None of these conditions apply to the discharges that would be covered by this Order.

Moreover, no antidegradation analysis is required when the Regional Water Board has no reason to believe that baseline water quality will be reduced. Baseline quality is the best quality of the receiving water that has existed since 1968 when considering Resolution No. 68-16, or since 1975 under the federal policy, unless subsequent lowering was due to regulatory action consistent with State and federal antidegration policies. If poorer water quality was permitted, the most recent water quality resulting from permitted action is the baseline water quality to be considered in an antidegration analysis. Since 1968, no regulatory action has lowered water quality with respect to chlorine, pH, sediment, settleable material, suspended material, or turbidity. This Order does not authorize degradation because it does not allow for any increase in flow or allow for any reduction in treatment. No increase in discharge beyond existing conditions is foreseeable, and no findings justifying degradation are necessary.

3. **Stringency of Requirements for Individual Pollutants.** The WQBELs in this Order are no more stringent than required to implement CWA requirements. They have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives 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). U.S. EPA approved the remaining beneficial uses and water quality objectives so they are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

VII. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations require compliance with federal and State water quality standards in accordance with the CWA and regulations adopted thereunder, and are based on narrative and numeric water quality objectives in Basin Plan Chapter 3.

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 C.F.R. section 122.41 and additional conditions applicable to specific categories of permits in accordance with 40 C.F.R. section 122.42. Dischargers must comply with these provisions. The conditions set forth in 40 C.F.R. sections 122.41(a)(1) and (b) through (n) apply to all state-issued NPDES permits and must be incorporated into the permit either expressly or by reference.

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. 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 State's enforcement authority is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

In addition, the following Attachment D provisions do not apply:

1. **Provision I.G—Bypass**. Provision I.G does not apply because the facilities this Order covers are not treatment facilities.

2. **Provision I.H—Upset.** Provision I.H does not apply because this Order does not contain technology-based effluent limitations.

3. **Provision V.E—Twenty-Four Hour Reporting.** Provision V.E.1 does not apply to the extent that Provision VII.C.3 of this Order is more stringent.

4. **Provision VII.A—Non-Municipal Facilities.** Provision VII.A does not apply because this Order does not cover discharges from manufacturing, commercial, mining, or silvicultural facilities.

5. **Provision VII.B—Publicly Owned Treatment Works (POTWs).** Provision VII.B does not apply because this Order does not cover POTWs.

B. Monitoring and Reporting Provisions

Pursuant to 40 C.F.R. section 122.48, NPDES permits must specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383, and 40 C.F.R. sections 122.41(h) and (j), authorize the Regional Water Board to require technical and monitoring reports. This Order establishes monitoring and reporting requirements, contained in the MRP, that implement federal and State requirements. For more background regarding these requirements, see section IX of this Fact Sheet.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63, and allow modification of this Order and its requirements as necessary in response to updated water quality

objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

2. Pre-Discharge Notification and Reporting of Planned Discharges From Chlorinated Reservoirs and Transmission Pipelines and Other High Volume Sources

Subsection a of this provision is authorized by 40 C.F.R. section 122.41(h), Water Code section 13267 and 13383, and Resolution R2-2008-0101. Regulations at 40 C.F.R. sections 122.41(h) impose a duty to provide information. Water Code sections13267 and 13383 authorize the Regional Water Board to require Dischargers to submit technical reports. As a condition of granting an exception from the SIP, Resolution No. R2-2008-0101 requires notification regarding short-term or seasonal discharges (see section II.C.5 of this Fact Sheet), including the method of undertaking the discharges and schedules (see Table F.3).

Subsection b of this provision is necessary to ensure protection of the Basin Plan narrative objectives for sediment or to cause a nuisance to downstream users. The requirement for a plan is authorized by Water Code section 13267, which authorizes the Regional Water Board to request technical information on planned discharges that could affect the quality of water within its region. Because high volume discharges have the potential to cause significant stream channel erosion and scouring both at the point of discharge and in downstream stretches, a Discharger is required to prepare and implement a discharge-specific plan for each planned discharge with a flow rate of at least 250,000 gallons per day or total volume of at least 500,000 gallons.

3. Post-Discharge Notification and Reporting (All Discharges)

These provisions are based on 40 C.F.R. section 122.41(h) and 122.41(l)(6); Water Code section 13267, 13271, and 13383; and Resolution R2-2008-0101. Regulations at 40 C.F.R. sections 122.41(h) and 122.41(l)(6) impose a duty on dischargers to provide information and report noncompliance that could endanger health or the environment within 24 hours of becoming aware of such circumstances. Water Code sections13267 and 13383 authorize the Regional Water Board to require dischargers to submit technical and monitoring reports. Water Code section 13271 authorizes the Regional Water Board to require dischargers discharging a hazardous waste to waters of the State to notify the California Office of Emergency Services as soon as (1) the entity has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures. The California Office of Emergency Services forwards notification information to first responders, local government agencies, and the Regional Water Board. As a condition of exception from the SIP, Resolution No. 2008-0101 requires notification regarding short-term or seasonal discharges (see section II.C.5 and Table F-3 of this Fact Sheet).

For discharges that result in adverse water quality impacts, it is necessary that the agencies responsible for protecting water quality and biological resources be immediately notified of such discharges. In some circumstances, these oversight agencies may need to send staff to a discharge site to observe and investigate, and to ensure that the Discharger is implementing appropriate measures to prevent or at least minimize impacts. Timely notification of discharges that result in a permit violation is necessary for the Regional Water Board to monitor Discharger responses and corrective actions.

4. Best Management Practices

This Order requires the following BMPs:

a. specify appropriate personnel for effective BMP Plan implementation;

b. identify contingency and emergency response measures;

c. identify source control measures, operations and maintenance procedures, and other routine measures to prevent or reduce to the extent possible planned and unplanned discharges;

d. control sedimentation and erosion;

e. control copper discharges; and

f. include a program of internal audits.

This provision is based on CWA section 304(e) and 40 C.F.R. section 122.44(k), which authorize the Regional Water Board to require implementation of BMPs when necessary to achieve effluent limitations and standards. The BMPs serve as narrative WQBELs for toxicity from chlorine; and sediment, settleable material, suspended material, and turbidity. The BMPs and are necessary to prevent toxicity from total chlorine residual and control sedimentation and erosion in receiving waters.

The copper control BMPs are based on Resolution No. R2-2008-0101 (see section II.C.5 of this Fact Sheet). Copper BMPs are necessary for Dischargers that treat raw water with copper sulfate or other copper-based herbicides to control algal blooms.

The audit requirement is necessary to evaluate the adequacy of BMP Plans and effectiveness of BMP implementation.

5. BMP Plan Evaluation and Improvement

This provision is based on CWA section 304(e) and 40 C.F.R. section 122.44(k), which authorize the Regional Water Board to require a discharger to implement BMPs when necessary to achieve effluent limitations and standards. The provision is necessary to ensure that BMP Plans are adequate to ensure that water quality standards are maintained and that they are effectively implemented.

This Order contains a turbidity action level to evaluate the adequacy and effectiveness of sediment control BMPs during trench dewatering and water supply well operations. Discharges from trenching dewatering and water supply well operations can generate relatively high sediment loads. Turbidity was chosen as a proxy for sediment, settleable material, and suspended material because it can be readily measured in the field. If the action level is exceeded routinely, BMP enhancements are needed to ensure that water quality standards are maintained.

The turbidity action level of 500 mg/L is consistent with the trigger level established in the State Water Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater Permit No. 2009-0009-DWQ

amended by 2010-0014-DWQ and 2012-0006-DWQ). The 500 NTU trigger value in the Construction Stormwater Permit represents an appropriate threshold level based on statewide construction site discharge information (monitoring data, estimates) and receiving water monitoring information. In particular, analysis of one dataset shows that the turbidity values in background receiving water in California's ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU). Based on this data, 500 NTU is an appropriate turbidity action level for discharges from trench dewatering and water supply well operations. This action level would ensure that BMPs will maintain discharge turbidity to no greater than 10 percent above the mean background turbidity levels in California waters. The Basin Plan turbidity objective provides that increase from background turbidity shall not be greater than 10 percent.

6. Biologist Certification

This provision is based on Resolution No. R2-2008-0101 and SIP section 5.3, which require dischargers to provide certification by a qualified biologist that receiving water beneficial uses are no longer actively being impacted, or have been restored.

IX. MONITORING AND REPORTING PROGRAM (MRP)

Attachment E contains the MRP for this Order. It specifies sampling stations, pollutants to be monitored (including parameters for which numeric WQBELs are specified), monitoring frequencies, and reporting requirements. The following provides the rationale for the MRP requirements.

A. Effluent Monitoring. Effluent monitoring is necessary to characterize the discharges and evaluate compliance with WQBELs. Monitoring is also necessary to confirm the suitability of each discharge for continued coverage under this Order.

1. Tiered Monitoring. The MRP reflects a tiered monitoring strategy based on discharge volume, original chlorine residual concentration, and distance to receiving water body. More effluent monitoring is required for super-chlorinated discharges because the higher chlorine concentration has a greater potential to cause receiving water toxicity if not removed. In addition, the MRP requires effluent monitoring for larger volume discharges in close proximity to a receiving water body since such discharges also have a greater potential to cause an impact on receiving water beneficial uses. In the analysis of SCVURPPP FY 2010-2011 and 2011-2012 data, about 20 percent of the over 7,000 reported planned chlorinated discharges were found to be greater than 15,000 gallons. Discharges located less than 300 feet from a receiving water body generally have less time to settle out sediments and to fully neutralize total chlorine residual before reaching a receiving water body. Turbidity monitoring is only required for discharges that meet the volume and distance thresholds from trench dewatering and well operations since such operations can result in the discharge of high sediment loads The monitoring data from these larger discharges close to receiving waters will provide sufficient information to characterize the discharges this Order covers and to confirm whether a Discharger is using BMPs effectively.

2. Total Chlorine Residual Minimum Level. A minimum level (ML) of 0.13 mg/L is appropriate for this Order to determine compliance with the effluent limitation because under field conditions, a total chlorine residual concentration as low as 0.019 mg/L is not feasible

to detect due to the limitations of field instruments commercially available. An ML of 0.13 mg/L was calculated by using U.S. EPA guidance[1] and the method detection limit data generated by the Missouri Department of Natural Resources for a field colorimeter[2]. Previous orders adopted in the San Francisco Bay Region, Orders No. R2-2008-0102 and R2-2009-0033), established an ML of 0.05 mg/L and 0.08 mg/L, respectively. Consideration of data generated by the Missouri Department of Natural Resources demonstrate that total residual chlorine results ranging between the MDL of 0.04 mg/l and the calculated ML of 0.13 mg/L are not reliable due to analytical noise.

B. Receiving Water Monitoring. This monitoring is necessary to characterize the receiving water and evaluate the effects of specified discharges covered by this Order on receiving water beneficial uses.

X. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, Regional Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties. The Regional Water Board notified the Discharger 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 Recorder*. The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay.

B. Written Comments. Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were due either in person or by mail at the Regional Water Board office at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Susan Glendening.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. June 23, 2014.

C. Public Hearing. The Regional Water Board held a public hearing on the tentative WDRs during its regular meeting at the following date and time, and at the following location:

Date: August 13, 2014
Time: 9:00 a.m.
Location: Elihu Harris Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Susan Glendening, (510) 622-2462, SGlendening@waterboards.ca.gov

[1] U.S. EPA, 1994. *National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality Based Effluent Limitations Set Below the Analytical Detection/Quantitation Levels*. NTIS PB95-159109.
[2] Missouri Department of Natural Resources, 2004, *Permit Manual, Appendix T: Total Chlorine Residual Study* .

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 to be in writing.

Dates and venues change. The Regional Water Board web address is http://www.waterboards.ca.gov/sanfranciscobay, where one could access the current agenda for changes in dates and locations.

D. Reconsideration of Waste Discharge Requirements. Any aggrieved person may petition the State Water Board to review the Regional Water Board decision regarding the final WDRs. The State Water Board must receive the petition at the following address within 30 calendar days of the Regional Water Board action:

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

For instructions on how to file a petition for review, see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml.

E. Information and Copying. The Report of Waste Discharge, related supporting documents, and comments received are on file and may be inspected at the address above at any time between 9:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged by calling (510) 622-2300.

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 the 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 Susan Glendening at (510) 622-2462 or SGlendening@waterboards.ca.gov.