

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Farhad Azimzadeh)
MEETING DATE: March 9, 2016

ITEM: **5B**

SUBJECT: **General Waste Discharge Requirements for Discharges of Treated Filter Backwash from Drinking Water Filter Facilities to Inland Surface Waters – Reissuance of General NPDES Permit**

CHRONOLOGY: April 2009 – General Permit reissued

DISCUSSION: This Revised Tentative Order (Appendix A) would reissue with a narrower scope a regional general permit that had regulated all discharges from this Region's drinking water treatment facilities. The permit would now regulate only filter backwash. The other discharges are now required to be covered by the State Board's 2014 General Permit for Drinking Water Systems such as from emergency treatment upsets. During issuance of the statewide general permit, State Board staff decided against covering routine filter backwash discharges in that permit.

Filter backwash discharges come from cleaning activities to restore efficient filter operation for treatment of drinking water. Water is flushed in the reverse direction and/or the filter sprayed to remove accumulated solids. The pollutants in filter backwash consist of the solids and trace contaminants in the water used for back-flushing and cleaning. These trace contaminants include chlorine, trihalomethanes, and copper, which are all normally present at safe levels for drinking but unsafe for aquatic life.

The San Francisco Public Utilities Commission, City of Napa, California Water Service, and Northern California Regional Water Agency Partners submitted numerous comments (Appendix B) on a tentative order circulated for public review. The comments mainly requested making this permit more consistent with the statewide general permit. This meant removing nearly all effluent limits and reducing monitoring and reporting. We have made revisions where appropriate as described in the Response to Comments (Appendix C). However, we disagree that this permit should be like the statewide general permit particularly as it relates to removing total suspended solids and settleable matter limits that the Revised Tentative Order retains from the previous permit. First, filter backwash potentially contains more pollutants than other drinking water discharges. Second, filter backwash discharges are routine and generally occur at fixed locations. This means they can be controlled and treated, unlike discharges covered by the statewide general permit, which are unplanned and/or at remote locations. Thus, the requirements in the Revised Tentative Order are appropriate and necessary to ensure proper treatment and control. We expect this item to remain uncontested.

RECOM-
MENDATION: Adoption of the Revised Tentative Order

APPENDICES: A. Revised Tentative Order
B. Comments
C. Response to Comments

FILE: CW-817137

Appendix A
Revised Tentative Order

San Francisco Bay Regional Water Quality Control Board

REVISED TENTATIVE ORDER No. R2-2016-00XX
NPDES PERMIT No. CAG382001

GENERAL WASTE DISCHARGE REQUIREMENTS
for
Discharges of Filter Backwash from Drinking Water Filter Facilities

Table 1. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), on:	<DATE>
This Order shall become effective on:	April 1, 2016
This Order shall expire on:	March 31, 2021
File number	CW-817137
CIWQS Regulatory Measure Number	402318
The U.S. Environmental Protection Agency (U.S. EPA) and the 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, prospective dischargers must submit a Notice of Intent (NOI) form in Attachment B and a filing fee equivalent to the first year's annual fee. Discharge is not authorized until the Regional Water Board Executive Officer issues an Authorization to Discharge.	
Authorized Dischargers that intend to continue discharging after the Order expiration date shall file a new NOI form no later than October 1, 2020.	

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.

Bruce H. Wolfe, Executive Officer

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I. SCOPE OF GENERAL PERMIT

These Waste Discharge Requirements (WDRs) shall serve as an NPDES General Permit for discharges of planned treated filter backwash from drinking water treatment facilities to inland surface waters.

This Order does not cover discharges that can be covered under the State Water Resources Control Board's (State Water Board) General NPDES Permit for Drinking Water System Discharges (Order WQ 2014-0194-DWQ, NPDES No. CAG140001), hereinafter referred to as the Statewide General Permit.

Fact Sheet (Attachment F) sections I and II provide additional information describing treated filter backwash discharges.

II. FINDINGS

The Regional Water Board finds the following:

- A. Legal Authorities.** This Order serves as WDRs pursuant to California 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).
- B. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through F are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** No provisions or requirements in this Order are included to implement State law only.
- D. Notification of Interested Parties.** The Regional Water Board notified prospective enrollees and interested agencies and persons of its intent to prescribe these WDRs and provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.
- E. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The Fact Sheet provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2009-0033 (previous order) is rescinded upon the effective date of this Order, except for enforcement purposes, and in order 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, Dischargers authorized to discharge pursuant to this Order shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of waste at a location or in a manner different than that described in the NOI and the Authorization to Discharge is prohibited.
- B. Bypassing settling basins or clarifiers, as identified in the NOI, is prohibited except as provided for in Attachment D section I.G.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**A. Effluent Limitations for Discharges**

Discharge from each outfall, as defined in the NOI and Authorization to Discharge, shall comply with the following effluent limitations:

Table 2. Filter Backwash Discharge Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum
Total Suspended Solids (TSS)	mg/L	---	45	30	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---
Total Chlorine Residual ^[1]	mg/L	---	---	---	0.0
Copper ^{[2],[3],[4]}	µg/L	8.7		4.3	
Whole Effluent Acute Toxicity	% Survival	[5]			

Abbreviations:

mg/L = milligrams per liter

µg/L = microgram per liter

Footnotes for Table 2:

- [1] A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be considered out of compliance with the chlorine effluent limitation.
- [2] Copper limits are applicable unless representative data of the discharge provided in the NOI for coverage under this Order demonstrates the discharge copper concentration is less than 6 µg/L. If the Executive Officer concurs, then the Executive Officer will indicate that copper limits are not applicable in the authorization to discharge or an amended authorization.
- [3] If the Discharger demonstrates that it qualifies for intake water credits, then the Discharger shall comply with the Intake Water-Based Limitations for copper in Provision VI.D rather than the water quality-based limitations in Table 2. The Executive Officer will determine if the Discharger qualifies in the authorization to discharge or an amended authorization, based on the Discharger's documentation in its NOI, or a supplemental to the NOI, that it meets all the conditions in Provision VI.D.1.
- [4] If the Discharger demonstrates that it qualifies for dilution credits, then the Discharger shall comply with the Dilution-Based Limitations for copper in Provision VI.E rather than the water quality-based limitations in Table 2. The Executive Officer will determine if the Discharger qualifies in the authorization to discharge or an amended authorization, based on the Discharger's documentation in its NOI, or a supplemental to the NOI, that it meets all the conditions in Provision VI.E.1.
- [5] Compliance with the acute toxicity limit shall be achieved in accordance with Provision IV of the attached MRP (Attachment E). Representative samples of the effluent shall meet the following limits for acute toxicity.
- a. The survival of bioassay test organisms in 96-hour static renewal bioassays of undiluted effluent shall be:
 - i. a 3-sample median value of not less than 90 percent survival; and
 - ii. a single-sample maximum of not less than 70 percent survival.
 - b. These acute toxicity limits are further defined as follows:
 - i. 3-sample median limit: 3-sample median is defined as follows: if one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.
 - ii. Single-sample maximum: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

V. RECEIVING WATER LIMITATIONS

A. Discharge shall not cause the following conditions to exist in receiving waters:

1. Erosion of the stream bank and streambed;
2. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;
3. Alteration of suspended sediment in such a manner as to cause nuisance, or to adversely affect beneficial uses, or to cause detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;
4. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;
5. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
6. Alteration of temperature beyond present natural background levels;
7. Coloration that causes nuisance or adversely affects beneficial uses;
8. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or
9. 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.

B. Discharge shall not cause the following limits to be exceeded in receiving waters:

1. **pH.** The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels, or the pH shall not be depressed below 6.5 nor raised above 8.5.
2. **Turbidity.** The discharge shall not increase turbidity above background levels by more than the following:

Receiving Water Background	Incremental Increase
<50 units (NTU)	5 units, maximum
50-100 units	10 units, maximum
>100 units	10% of background, maximum

VI. PROVISIONS**A. Standard Provisions**

The Discharger shall comply with the Standard Provisions in Attachment D.

B. Monitoring and Reporting Provisions

The Discharger shall comply with the Monitoring and Reporting Program (MRP) in Attachment E, and future revisions thereto, and applicable sampling and reporting requirements in Attachment D. The Executive Officer may specify additional monitoring requirements in individual Authorizations to Discharge.

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, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.
- b. If new or revised water quality standards or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous waters (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 standards or TMDL wasteload allocations. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally-adopted water quality standards or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications.
- c. If translator, dilution, or other water quality studies provide a basis for determining that a permit condition should be modified.
- d. If State Water Board-precedential decisions, new policies, new laws, or new regulations are adopted.
- e. If an administrative or judicial decision on a separate NPDES permit or WDR addresses requirements similar to those applicable to these discharges.
- f. Or as otherwise authorized by law.

A Discharger may request a permit modification based on any of the circumstances above. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses.

2. Application for General Permit Coverage and Authorization to Discharge

- a. **Notice of Intent (NOI).** A prospective discharger seeking an Authorization to Discharge pursuant to this Order shall complete and submit the NOI form in Attachment B. A prospective discharger seeking coverage for similar discharges at multiple sites may complete one NOI that describes all proposed discharges; however, it shall submit separate fees for each site. If a discharger seeks intake water credit- or dilution-based limitations, it must include with the NOI a demonstration that the discharger meets the condition described in Provision VI.D.1 or VI.E1, respectively. The Executive Officer may modify the NOI form in Attachment B or require additional information prior to authorizing any discharge.
- b. **Facility Modifications.** At least 30 days prior to any significant facility modification (e.g., changing an outfall location), the Discharger proposing the modifications shall submit a modified NOI form (e.g., a mark-up of the original NOI form showing all changes and including a new signature and date). The Discharger shall include a letter describing the changes, their purpose, when they are to go into effect, and any new or additional measures taken or planned to prevent potential non-compliance with this

Order's requirements.

- c. Authorization to Discharge.** If the Executive Officer concludes that a proposed discharge is eligible for coverage under this Order, the Executive Officer will issue an Authorization to Discharge. Upon the effective date of the Authorization of Discharge, the Discharger shall comply with the requirements of this Order and its attachments. Any non-compliance with this Order's requirements shall constitute a violation of the CWA and Water Code and may be grounds for enforcement; termination, revocation and reissuance, or modification of the Authorization to Discharge; issuance of an individual permit; or denial of an application for reissuance.
- d. Application to Extend Coverage.** A Discharger that intends to continue discharging after the expiration date on Table 1, first page, of this Order shall file a new NOI form no later than nine months before the expiration date specified on Table 1.
- e. Discharge Termination.** A Discharger may terminate its coverage under this Order by submitting a letter rescinding its NOI and stating the reason for termination. The Executive Officer may also terminate or revoke coverage under this Order for any of the causes specified for an individual permit as set forth in 40 C.F.R. section 122.28(b)(3). After providing notice and opportunity for a hearing, coverage under this Order may be terminated or modified for cause, including, but not limited to, the following:

 - i.** Violation of any term or condition of this Order;
 - ii.** Misrepresentation or failure to disclose all relevant facts in obtaining coverage under this Order; or
 - iii.** Change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- f. Need for Individual NPDES Permit.** The Executive Officer may require any Discharger authorized to discharge pursuant to this Order to subsequently apply for and obtain an individual NPDES permit in the following circumstances:

 - i.** The Discharger is not in compliance with the requirements of this Order,
 - ii.** A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants from the facility,
 - iii.** Effluent limitation guidelines are promulgated for the discharges covered by this Order,
 - iv.** A new or revised water quality control plan containing requirements applicable to the discharge is approved,
 - v.** The requirements of 40 C.F.R. section 122.28(a) (the circumstances under which the Regional Water Board is authorized to issue a general permit) are not met, or
 - vi.** Any other condition specified in 40 C.F.R. section 122.28(b)(3) is met.

3. Operations and Maintenance Manual Review and Status Reports

- a.** The Discharger shall maintain Operations and Maintenance Manuals for its filter backwash treatment facilities in usable condition and make them available for reference and use by appropriate personnel, including those working onsite.

- b. The Discharger shall regularly review, and revise or update as necessary, its Operations and Maintenance Manuals so that they remain useful and relevant to current equipment and operational practices. The Discharger shall review Operations and Maintenance Manuals at least annually. In the event of any significant changes in filter facility equipment or operational practices, the Discharger shall complete revisions within 90 days of completing such changes.
- c. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Operations and Maintenance Manuals, including any recommended or planned actions and a time schedule for these actions.
- d. The Discharger shall describe its review and evaluation procedures, and applicable changes to its Operations and Maintenance Manuals, in each annual self-monitoring report.

4. Best Management Practices (BMP) Plan

- a. The Discharger shall develop and keep on site a BMPs Plan, as relates to its filter backwash treatment facilities, including the management of the solids removed from filter backwash, and make it available to the Executive Officer upon request.
- b. The BMPs Plan shall describe specific means of controlling pollutant discharges identified in the NOI.
- c. The most updated, site-specific BMPs Plan shall be maintained and available for review at the facility during the term of this Order.
- d. The Discharger shall implement its BMPs Plan upon receipt of Authorization to Discharge. The Executive Officer may require additional pollutant control and treatment measures if existing measures are found to be inadequate to control pollutant discharges.
- e. All field personnel, onsite supervisors, and operators shall receive training in the site-specific BMPs Plan, as relates to filter backwash facilities, at least annually.
- f. The Discharger shall review and update the effectiveness and adequacy of its BMPs as often as necessary and at least annually. The Discharger shall summarize its review of, and any updates made, to the BMPs plan annually with annual self-monitoring reports.

D. Intake Water Credit-Based Limitations

1. Conditions to Qualify

- a. The maximum observed intake water concentration for copper exceeds 6.0 µg/L.
- b. The intake water shall be from the same water body as the receiving water body. To qualify for intake water credit based limitations, the Discharger shall demonstrate that it meets this condition in an attachment to its NOI by showing all of the following:
 - i. The ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water.
 - ii. There is a direct hydrological connection between the intake and discharge points.
 - iii. The water quality characteristics are similar in the intake and receiving water.

- iv. The intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been taken by the Discharger.
- c. The facility does not alter the copper in the intake water chemically or physically in a manner that adversely affects water quality and beneficial uses of the receiving water.
- d. The timing and location of discharge(s) does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water copper had been left in the receiving water body.

2. Copper Limitations Based on Intake Water Credit

- a. If the Authorization to Discharge specifies that intake water credit-based limitations are applicable, then the Discharger shall comply with the following limitation:
 - i. The copper in the discharge must be less than or equal to the mass and concentration in the intake water.
- b. Compliance with the intake water credit-based limitations shall be determined as follows:
 - i. Monitor intake water for copper as required in the Monitoring and Reporting Program, Attachment E.
 - ii. Compare on an annual average basis, the concentrations of the discharge to the intake water; the discharge concentration must be less than or equal to the intake concentration for each calendar quarter. The annual average concentration shall be calculated by averaging all concentration values collected within a calendar year.
 - iii. Compare on an annual average basis the mass load in the discharge to the mass load from the intake water; the mass load in the discharge must be less than or equal to the mass load from the intake water. The annual average mass load shall be calculated by averaging all mass load values from a calendar year, and each calculated mass load shall be reported in the annual self-monitoring report. Each mass load value shall be calculated as follows:

$$\text{Mass Load in kg/day} = C \times Q \times 0.00378541$$

where,

C = Copper concentration in $\mu\text{g/L}$

Q = Daily flow rate on the day, or that corresponds to the period, when monitoring for copper occurred, in million gallons per day (MGD)

0.00378541 = Conversion factor to convert ($\mu\text{g/L}$) \times (MGD) into kg/day

E. Dilution-Based Limitations

1. Conditions to Qualify

- a. The maximum observed copper ambient background concentration is less than 6 $\mu\text{g/L}$.
- b. The NOI application shall in detail describe the method by which the Discharger's proposed mixing zone was derived, the dilution credit calculated, and the point(s) in the receiving water where the applicable criteria/objectives will be met. The NOI application shall include, to the extent feasible, a mixing zone study.

- c. The mixing zone justification shall demonstrate that the proposed mixing zone is as small as practicable and meets all of the following:
- i. Does not compromise the integrity of the entire water body.
 - ii. Does not cause acutely toxic conditions to aquatic life passing through the mixing zone.
 - iii. Does not restrict the passage of aquatic life.
 - iv. Does not adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws.
 - v. Does not produce undesirable or nuisance aquatic life.
 - vi. Does not produce objectionable color, odor, taste, or turbidity.
 - vii. Does not cause objectionable bottom deposits.
 - viii. Does not dominate the receiving water body or overlap a mixing zone from different outfalls.
 - ix. Does not exceed the applicable public health goal for copper in drinking water (currently 1,300 µg/L).

2. Copper Limitations Based on Dilution Credit

If the Discharger demonstrates, to the satisfaction of the Executive Officer, that its discharge meets all the conditions in subsection E.1, above, and justifies one of the dilution credits listed below, then the Authorization to Discharge will specify the copper effluent limitations that apply from one of the following:

Copper Limitations based on Dilution Credit	Units	Daily Maximum	Monthly Average
Demonstrated dilution ≥ 2	µg/L	12.0	24.1
Demonstrated dilution ≥ 5	µg/L	23.5	47.1
Demonstrated dilution ≥ 9	µg/L	38.8	77.9
Demonstrated dilution ≥ 15	µg/L	61.8	124

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:

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

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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 (CV)

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

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.

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 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.

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.

Reporting Level (RL)

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.

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 best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. A TIE is a set of procedures to identify the specific 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 (NOI) FORM

NOTICE OF INTENT to comply with NPDES Permit No. CAG382001, authorizing discharges of filter backwash wastewater from drinking water filter facilities to inland surface waters.

DISCHARGER TO PROVIDE THE FOLLOWING INFORMATION

I. FACILITY OWNER AND OPERATOR INFORMATION

Owner Name		Land Owner Type (Check One) <input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Other, specify the type:	
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name and Title			
Contact Person's Email		Contact Person's Phone No.	

Check here if information for additional owners is attached to this form.

Operator Name		Facility Owner Type (Check One) <input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Other, specify the type:	
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name and Title			
Contact Person's Email		Contact Person's Phone No.	

Check here if information for additional operators is attached to this form.

II. BILLING INFORMATION

Name of person who will be responsible for paying fees			
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name			
Contact Person's Email		Contact Person's Phone No.	

III. DISCHARGE POINTS AND RECEIVING WATERS^[1]

Discharge Points	Latitude	Longitude	Receiving Water Name
1			
2			
3			
4			

^[1] If discharging to a storm drain system, attach documentation indicating approval to discharge from the agency responsible for the system.

Check here if information for additional outfalls is attached to this form.

IV. DISCHARGE AND RECEIVING WATER QUALITY

Summarize discharge and receiving water monitoring data collected during the past five years. New dischargers may estimate future concentrations. Provide separate data summary table for each discharge point (outfall) and receiving water. A discharger who was covered under the previous order and had submitted an NOI for continued coverage under a to be reissued permit are not required to submit the following data with its new NOI for coverage under this Order; however, the Discharger shall submit the following data with the NOI due in 2020 if it plans to seek coverage under a future reissued permit.

A. EFFLUENT DISCHARGE DATA

Discharge Point No.^[1]: _____

Parameter	Units	Highest Value	Range	Number of Samples	Test Method	Method Detection Limit
Total Suspended Solids	mg/L					
Turbidity	NTU					
Settleable Matter	mL/L-hr					
pH	s.u.				N/A	
Total Chlorine Residual	mg/L					
Acute Toxicity	% survival					
Copper	µg/L					
Zinc	µg/L					
Mercury	µg/L					
Selenium	µg/L					
Arsenic	µg/L					
Cadmium	µg/L					
Chromium	µg/L					
Lead	µg/L					
Nickel	µg/L					
Silver	µg/L					
Chloroform	µg/L					
Bromoform	µg/L					
Dichlorobromomethane	µg/L					
Chlorodibromomethane	µg/L					
Other Pollutants (see Fact Sheet Table F-3)						

^[1] Attach additional sheets for each discharge point.

B. RECEIVING WATER DATA

Receiving Water Name:

Parameter	Units	Highest Value	Range	Number of Samples	Test Method	Method Detection Limit
Stream Flow Rate	GPD					
Dissolved Oxygen	mg/L and % saturation					
Turbidity	NTU					
pH	s.u.					
Total Suspended Solids	mg/L					
Temperature	°C					
Hardness	mg/L as CaCO ₃					
Copper	µg/L					
Zinc	µg/L					
Arsenic	µg/L					
Cadmium	µg/L					
Chromium	µg/L					
Lead	µg/L					
Mercury	µg/L					
Nickel	µg/L					
Selenium	µg/L					
Silver	µg/L					
Chloroform	µg/L					
Dichlorobromomethane	µg/L					
Chlorodibromomethane	µg/L					
Bromoform	µg/L					
Other Pollutants (see Fact Sheet Table F-3).						

V. LOCATION MAP

Attach topographic map(s) of the area that clearly show the following:

1. The legal boundaries of the facility.
2. Locations of all water and wastewater treatment units, such as settling basins.
3. The location and identification number of each of the facility's existing and/or proposed intake and discharge point.
4. The receiving water(s) (water of the U.S.) and receiving storm water drainage system(s), if applicable, identified and labeled.

VI. FLOW CHART

Attach a flow chart, line drawing, or diagrams showing the filter backwash wastewater flow from treatment system to discharge.

VII. SITE-SPECIFIC BEST MANAGEMENT PRACTICES (BMPs) PLAN

Develop and keep on site a site-specific BMPs plan that addresses all specific means of controlling pollutant discharges from the filter backwash wastewater treatment system (see Provision VI.C.4.a of this Order).

VIII. DULY AUTHORIZED REPRESENTATIVE

The following individual (or any individual occupying the position listed below) may act as the facility’s duly authorized representative, and may sign and certify submittals in accordance with Attachment D section V.B.3, as a Duly Authorized Representative of the Responsible Official in IX, below. This individual shall be responsible for the overall operation of the facility or for facility environmental matters.

Duly Authorized Representative		
Title		
Company / Organization		
Street Address		
City	State	Zip Code
Email		Phone No.

IX. CERTIFICATION

This certification shall be signed by a Responsible Official as defined in Attachment D section V.B.2. By signing, the Responsible Official hereby agrees to comply with all the conditions specified in NPDES Permit No. CAG382001.

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 but not limited to the criteria for eligibility, will be complied with.	
Signature	Date:
Printed Name	
Title	
Company / Organization	
Email	Phone No.

X. APPLICATION FEE AND MAILING INSTRUCTIONS

Submit a check payable to the “State Water Resources Control Board” with the appropriate fee to the following address:

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

Submit this form (with signature and attachments) electronically to Farhad.Azimzadeh@waterboards.ca.gov, or as otherwise indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml. If the form cannot be submitted electronically, submit a hard copy to the address above.

For Dischargers authorized under the previous order and who wish to continue discharge under this Order, a check for permit application fee is not required with the NOI for continued coverage. Instead, these authorized Dischargers must continue to pay annual fee invoices.

ATTACHMENT C – INSTRUCTIONS FOR NOTICE OF INTENT (NOI) FORM

These instructions explain how to complete the Notice of Intent (NOI) form in Attachment B. Submittal of an NOI indicates a Discharger's commitment to comply with the terms of this Order, which authorizes discharges of filter backwash wastewater from drinking water filter facilities to inland surface waters.

I. FACILITY OWNER/OPERATOR INFORMATION

The owner is the organization or person who owns or leases the facility or land where the drinking water filter facility is located. For a facility that is one of several owned by a corporation, indicate the corporation name and the name by which the facility is known to the employees (i.e., ABC Inc. - DEF Facility). Provide the street address or a description of the facility location (i.e., 1234 15th Drive or northwest corner of 1st Street and X Avenue). Note that each facility must obtain separate coverage under this Order.

II. BILLING INFORMATION

Indicate to whom the annual permit fee should be billed.

III. DISCHARGE POINTS AND RECEIVING WATERS

List all discharge points for which permit coverage under this Order is sought. This Order will not cover discharges that are not listed here.

The discharge point is generally the point of first contact with State waters. Provide the coordinates of each discharge point. A U.S. Geographical Survey (USGS) or any other appropriate map may be used to interpolate the coordinates.

If the discharge enters a separate storm drainage system prior to contact with a State water, provide the name of the State watercourse or water body to which the storm drainage system discharges. Please contact the owner of the storm drainage system about your proposed discharge.

Attach a separate sheet for additional discharge points. Properly label the discharge points with numbers that correspond to the discharge point label(s) on the location map(s) and flow chart(s) submitted.

IV. DISCHARGE AND RECEIVING WATER QUALITY

For existing facilities, all of the parameters must be tested by a State-certified laboratory and reported in this table. If discharge data have not already been provided to the Regional Water Board, provide a copy of the laboratory data sheets and chain of custody documents, as applicable. For a new or proposed facility, enter estimated values to this table. Where there is more than one outfall, submit a separate sheet for each outfall. Test results shall be obtained from a sample or samples representative of the discharge.

Other pollutants in the last row for the effluent and receiving water monitoring data include the following: chlordane, coliform bacteria, DDT (dichlorodiphenyltrichloroethane), diazinon, dieldrin, heptachlor epoxide, low dissolved oxygen, mercury, nickel, nutrient/eutrophication biological indicators, nutrients, organic enrichment/low dissolved oxygen, pathogens, PCBs (polychlorinated biphenyls), pH, pyrethroids, sediment toxicity, sedimentation/siltation, selenium, temperature, toxaphene, toxicity, and trash.

V. LOCATION MAP

Provide a location map on an 8.5 by 11-inch sheet or folded to 8.5 by 11-inch. Show at least one mile beyond the property boundaries of the facility on the map.

Indicate the discharge point(s) on the location map and include all of the required information. The discharge point(s) may include where the discharge exits the facility and enters the roadway right-of-way and then flows into a separate storm drainage system and/or where the discharge directly enters the State waters.

VI. FLOW CHART

The flow chart shall indicate all portions of the filter backwash wastewater treatment system including discharge of treated filter backwash wastewater to the receiving water, and the approximate amounts of flow through each process or discharge. Flow quantities may be estimated if no data are available.

VII. SITE-SPECIFIC BEST MANAGEMENT PRACTICES (BMPs) PLAN

A. Site-specific BMPs Plan for Discharges from Drinking Water Filter Facilities

Applicants shall state in the NOI that it has developed a site-specific BMPs Plan that is ready for implementation, and that the site-specific BMPs Plan includes, at minimum, the following information:

1. **Facility Operation** - Describe the operation of the facility.
 - a. Describe the filter backwash treatment processes, and include a flow diagram.
 - b. Provide the filter backwashing frequency and flow rate.
 - c. Describe chemical usage for filter backwash treatment, if any, and include a section estimating the residual concentration in the discharge as compared to the no adverse effect level concentration as documented in the ecological section of the applicable Material Safety Data Sheet (MSDS) for each chemical used. A copy of the MSDS for each chemical used for filter backwash treatment is required to be included in the BMP.
 - d. Describe filter backwash treatment method(s) (e.g., settling basin).
2. **Potential Pollutants** - Describe pollutants that may potentially be generated by the facility. These pollutants may include, but are not be limited to:
 - a. Chemicals used in water treatment;
 - b. Pollutants associated with operation and maintenance of equipment, such as oil and grease and hydraulic fluid leakage and spills;

- c. Any solids or sediments generated by the operation (e.g., in filter backwash wastewater);
- d. Stormwater runoff from exposed oil, fuel, or any hazardous material storage locations and containment structures;
- e. Evaluation of stream bank conditions (i.e., potential for erosion) at locations where large volumes of discharged water may enter the stream.

3. Pollution Control and Effluent Treatment Methods – Describe in detail the control and treatment measures for each of the potential pollutants identified under item VII.2 above:

- a. Prevention measures to be implemented to prevent the pollutants from entering the effluent and receiving water;
- b. Measures to reduce or eliminate the use of copper compound to the maximum extent practical;
- c. Effluent treatment methods to be implemented onsite to remove the pollutants in the effluent (indicate the treatment system locations on the location map);
- d. Maintenance procedures and maintenance schedules to maintain the effluent treatment system; and
- e. Methods to prevent stream bank erosion resulting from the discharge (e.g., bank stabilization, control of discharge rate).

4. Chlorine and/or Ammonia Management

- a. Storage and transportation. The BMPs Plan shall describe the form of disinfection chemicals (e.g., chlorine gas, sodium hypochlorite, and ammonia) used at the facility. The BMPs Plan shall also include storage methods, storage tank size and location, secondary containment, and any exposed pipes used for transport.
- b. Chlorine and/or ammonia spill and leakage prevention. The BMPs Plan shall specify how chlorine and/or ammonia are handled to prevent spills, and the emergency response and cleanup plan in the event of a spill or leakage. The BMPs Plan shall also include the schedule for routine inspection of chlorine and/or ammonia storage sites and transport piping to prevent leaks.
- c. Chlorinated and/or chloraminated water spill. The Discharge shall install an alarm system to provide warning of chlorinated and/or chloraminated water overflows or spills. The BMPs Plan shall describe procedures for dechlorination of spill or overflow water.
- d. Water release. The BMPs Plan shall include a set of standard procedures for total chlorine residual monitoring and dechlorination of chlorinated and/or chloraminated water to be released or discharged to State waters.
- e. Responsibility and training. The BMPs Plan shall identify the names and positions of persons responsible for the tasks identified in the BMPs Plan. The BMPs Plan shall also include the schedule(s) for BMPs training.

VIII. DULY AUTHORIZED REPRESENTATIVE

The person described in Attachment D section V.B.2 and signing the certification in section XII of the NOI form may designate a duly authorized representative to sign permit-related submittals in accordance with Attachment D section V.B.3. Alternatively, a duly authorized representative may be designated through separate correspondence, particularly if the NOI form language does not sufficiently limit the delegated authority.

IX. CERTIFICATION

The person certifying the NOI form must meet the requirements described in Attachment D section V.B.2. *Review these requirements carefully.* Specific requirements apply to corporations, partnerships, sole proprietorships, and public agencies.

X. APPLICATION FEE AND MAILING INSTRUCTIONS

The NOI is incomplete without the full permit fee, unless the NOI is for a Discharger authorized under the previous order who is also in good standing regarding payment of annual fees. A separate fee is required for each facility. As of 2015, the application fee is **\$7,177**. The State Water Resources Control Board may modify the fee at any time. For the current fee, see http://www.waterboards.ca.gov/resources/fees/water_quality/#npdes.

ATTACHMENT D –STANDARD PROVISIONS**I. STANDARD PROVISIONS – PERMIT COMPLIANCE****A. Duty to Comply**

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
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, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. **Bypass not exceeding limitations.** The 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 approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

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, 13383.)

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 utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The 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 13268, 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 ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(1)(i));
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ 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 ($\mu\text{g/L}$) (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)

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State laws and regulations.

I. GENERAL MONITORING PROVISIONS

- A. The Discharger 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. The Discharger shall conduct all monitoring in accordance with Attachment D, section III. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. part 136 and must be specified in this Order or the Discharger’s Authorization to Discharge. Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with Water Code section 13176.
- C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

II. MONITORING LOCATIONS

The Discharger shall establish monitoring locations as set forth below to demonstrate compliance with this Order:

Table E-1. Monitoring Locations

Monitoring Location Type	Monitoring Location Name	Monitoring Location Description
Intake Water ^[1]	INF-001 through INF-“n”	Any point in the intake between the point of extraction from the water source and prior to any treatment or other modification of the intake water.
Effluent	EFF-001 through EFF-“n”	Any point in the outfall between the point of discharge to the receiving water and the point at which all waste tributary to the outfall is present.
Receiving Water	RSW-001	A point in the receiving water where discharge effects would not be expected (e.g., upstream of the outfall).

Footnotes:

[1] Intake water monitoring is required only for Dischargers who must comply with intake water credit-based limitations.

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

- A. When discharging, the Discharger shall monitor the discharge at Monitoring Locations EFF-001 through EFF-“n” in accordance with Table E-2 below.
- B. Effluent monitoring for treated filter backwash is only required when discharging to the receiving waters.
- C. When a sampling result is above an effluent limitation or outside of the effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to daily until at least two consecutive daily samples demonstrate compliance with the limitation. The Discharger must monitor as frequently as practical, but not less than weekly, and the Discharger must justify in the monitoring reports, subject to Executive Officer approval, the reason(s) why daily monitoring is impracticable.

- D.** Grab samples shall be collected on random days and, to the greatest extent possible, during periods of daytime maximum flow (if flow varies significantly during the day).
- E. Intake Water Monitoring.** If required to comply with intake water credit-based effluent limitations, then the Discharger shall monitor the intake water at INF-001 through INF-“n” as follows:
1. The Discharger shall monitor the intake-credited pollutant once per quarter concurrently with monitoring for that pollutant in the effluent discharge.
 2. If a result indicates that the effluent pollutant concentration or mass load is greater than the intake water pollutant concentration or mass load, then the Discharger shall accelerate sampling frequency to weekly until the calculated annual averages after at least two consecutive samples demonstrate compliance with the Intake Water Credit-Based Limitation in Provision VI.D of the Order.

Table E-2. Treated Filter Backwash Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate and Volume ^[1]	MGD/MG	Continuous or daily	1/Day
Total Suspended Solids (TSS) ^[2]	mg/L	Grab	2/Year
Settleable Matter ^[2]	mL/L-hr	Grab	2/Year
Total Chlorine Residual ^[3]	mg/L	Grab	1/4 Hours
Turbidity ^[4]	NTU	Grab	2/Year
pH	standard units	Grab	2/Year
Copper, Total Recoverable ^[4]	µg/L	Grab	1/Quarter
Zinc, Total Recoverable ^[4]	µg/L	Grab	Once
Mercury, Total Recoverable ^[4, 5]	µg/L	Grab	Once
Selenium, Total Recoverable ^[4]	µg/L	Grab	Once
Arsenic, Cadmium, Chromium (VI), Lead, Nickel, Silver ^[4]	µg/L	Grab	Once
Chloroform	µg/L	Grab	Once
Dichlorobromomethane	µg/L	Grab	Once
Chlorodibromomethane	µg/L	Grab	Once
Bromoform	µg/L	Grab	Once
Acute Toxicity ^[6]	% survival	Grab	2/Year ^[6]
Other Pollutants (see Fact Sheet Table F-3) ^[8]	µg/L or other units as applicable	Grab	Once

Abbreviations:

MGD = million gallons per day

MG = million gallons

NTU = nephelometric turbidity units

mL/L/hr = milliliters per liter per hour

% survival = percent survival

mg/L = milligrams per liter

µg/L = micrograms per liter

2/Year = twice per year

1/4 Hours = once every four hours. If more frequent monitoring is conducted, all exceedances must be reported.

- 1/Quarter = once per quarter
 Once = once during the term of this Order and completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.

Sample Type:

- Continuous = measured continuously, and recorded and reported daily
 Grab = Grab samples of effluent shall be collected during periods of maximum peak flows. Samples shall be taken on random days.

Footnotes:

- [1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:
- Daily total flow volume (MG)
 - Daily discharge duration (hours)
 - Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
 - Monthly total flow volume (MG)
 - Discharge days per month
 - Monthly average and daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows).
- The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.
- [2] The Discharger shall accelerate monitoring in accordance with III.C above for a parameter anytime it becomes aware that a monitoring result indicates exceedance. For intermittent discharges for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance with a monthly average limit shall be based on at least two monitoring results collected within a calendar month. In other words, if a second sample cannot be collected within a calendar month because there is no discharge, then the one sample that was collected shall be used for compliance with only the daily maximum or weekly average limits.
- [3] The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) and reporting limit (RL) for total residual chlorine. If the Discharger monitors chlorine residual continuously, then the Discharger shall describe any and all excursions of the chlorine limit and corrective measures applied to address excursions in the transmittal letter of self-monitoring reports. However, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on discrete readings from the continuous data every 4 hours on the hour or at the beginning of discharge and then every 4 hours during discharge. The Regional Water Board reserves the right to use all continuous monitoring data for discretionary enforcement. The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that residual dechlorinating agent is present. This monitoring system may be used to prove that anomalous residual chlorine exceedances measured by on-line chlorine analyzers are false positives because it is chemically improbable to have chlorine present in the presence of sodium bisulfite. If Regional Water Board staff finds convincing evidence that chlorine residual exceedances are false positives, the exceedances are not violations of this Order's total chlorine residual limit.
- [4] All metals shall be reported as total recoverable. If total chromium concentration exceeds 11 ug/L, then analysis for chromium VI shall also be conducted.
- [5] For mercury monitoring, the Discharger has the option to use U.S. EPA Method 245.1 or 245.7. However, if the Method 245.1 or 245.7 result shows mercury at or greater than the lowest applicable objective (see Table F-3), then the Discharge must re-monitor at least once using ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631).
- [6] Acute toxicity monitoring shall be performed according to MRP section IV. If there has been no toxicity for the past three consecutive years (i.e., discharge has been in compliance with the acute toxicity limitations), then the Discharger may reduce the toxicity testing frequency to once per year as long as it continues to maintain no toxicity.

IV. WHOLE EFFLUENT ACUTE TOXICITY TESTING

- Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Locations EFF-001 through EFF-"n" by measuring survival of test organisms exposed to 96-hour static renewal bioassays. Samples shall be collected on days coincident with effluent sampling.
- Test species shall be rainbow trout or a species the Executive Officer approves. The Executive Officer may specify a more sensitive species or, if testing a particular species proves unworkable, the most sensitive species available.
- All bioassays shall be performed according to 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine*

Organisms, 5th Edition (EAP-821-R-02-012), with exceptions granted in writing by the Executive Officer and the Environmental Laboratory Accreditation Program upon a Discharger request with justification.

- D.** If a Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment. The Discharger may manually adjust the pH of whole effluent acute toxicity samples prior to performing bioassays. Effluent shall be dechlorinated prior to testing if it contains chlorine.
- E.** Bioassay water monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).
- F.** The Discharger shall investigate the cause of any mortalities and report its findings in the next self-monitoring report.

V. RECEIVING WATER MONITORING

- A.** The Discharger shall monitor receiving waters at Monitoring Location RSW-001 as indicated in the table below:

Table E-3. Receiving Water Monitoring

Parameter	Units	Sample Type ^[1]	Minimum Sampling Frequency ^[2]
Dissolved Oxygen	mg/L and % saturation	Grab	[3]
Turbidity	NTU	Grab	[3]
Total Suspended Solids (TSS)	mg/L	Grab	[3]
Temperature	°C	Grab	[3]
pH	s.u.	Grab	[3]
Hardness	mg/L as CaCO ₃	Grab	[3]
Arsenic, Cadmium, Copper, Chromium (VI), Lead, Nickel, Selenium, Silver, Zinc ^[5]	ug/L	Grab	[3]
Mercury, Total Recoverable ^[4]	ug/L	Grab	[3]
Chloroform	ug/L	Grab	[3]
Dichlorobromomethane	ug/L	Grab	[3]
Chlorodibromomethane	ug/L	Grab	[3]
Bromoform	ug/L	Grab	[3]
Other Pollutants (see Fact Sheet Table F-3)	µg/L or other units as applicable	Grab or as applicable	[3]

Abbreviations:

NTU	= nephelometric turbidity units
mg/L	= milligrams per liter
CaCO ₃	= calcium carbonate
°C	= degrees Celsius
ug/L	= micrograms per liter
ppt	= parts per trillion

Footnotes:

- ^[1] Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR 136. For priority pollutants, the methods must meet the lowest MLs specified in SIP Attachment 4, and Table E-5 MLs. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.
- ^[2] Samples shall be collected from a location not impacted by the discharge.
- ^[3] The receiving water data must be sufficient to characterize the concentration of each toxic pollutant in the ambient receiving water. The data on the conventional water quality parameters (pH, salinity, and hardness) should also be sufficient to characterize these parameters in the ambient receiving water. The receiving water shall be monitored once during the term of this Order. Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.
- ^[4] For mercury monitoring, the Discharger has the option to use U.S. EPA Method 245.1 or 245.7. However, if the Method 245.1 or 245.7 result shows mercury at or greater than the lowest applicable objective (see Table F-3), then the Discharge must re-monitor at least once using ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631).
- ^[5] All metals shall be reported as total recoverable. If total chromium concentration exceeds 11 ug/L, then analysis for chromium VI shall also be conducted.

- B.** Receiving water samples shall be collected on days coincident with effluent sampling or as required to meet Title 22 drinking water intake monitoring requirements. When possible, the Discharger should coordinate the Title 22 drinking water intake monitoring to be on the same day as effluent monitoring of filter backwash discharge. Samples shall be collected from a location not impacted by the discharge.
- C.** Receiving water monitoring is not required when there is no water in the receiving water other than the discharge.
- D.** The Executive Officer may waive receiving water monitoring requirements where access for sampling is unsafe or excessively difficult. If the Discharger seeks waiver from receiving water monitoring, the Discharger shall provide justification for the waiver with its NOI.

VI. REPORTING**A. General Reporting Requirements**

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

B. Self-Monitoring Reports

- 1. Format.** At any time during the term of this Order, the State or Regional Water Board may notify the Dischargers to electronically submit self-monitoring reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS website will provide additional information for SMR submittal in the event of a planned service interruption for electronic submittal. In the interim, Dischargers shall submit SMRs using the submittal method specified in Authorization to Discharge.
- 2. Due Dates and Contents.** The Discharger shall submit annual SMRs March 1 each year covering the previous calendar year. The annual SMR shall contain the items below:

- a. The applicable items described in Attachment D, sections V.B and V.C.
- b. The results of all monitoring specified in the MRP. The Discharger shall arrange all reported data in a tabular format and summarize data to clearly illustrate whether the Facility is operating in compliance with effluent limitations.
- c. The Discharger shall attach a cover letter to each SMR that includes the following:
 - i. Clear identification of any violations of the Order or a clear statement that there were no violations.
 - ii. Annual compliance evaluation summary that identifies each parameter for which the Order specifies an effluent limit, the number of samples taken during the monitoring period, and the number of samples that exceed the effluent limits.
 - iii. Detailed description of any violations, their causes, and proposed time schedule for any corrective actions taken or planned to resolve the violations and prevent recurrences.
 - iv. Tabulations of required analyses and observations, including parameters, dates, times, monitoring locations, sample types, test results, method detection limits, MLs, and RLs, which are based on the laboratory report(s) and signed by the laboratory director or other responsible official. In addition, if intake water or dilution credit-based limitations apply, the Discharger shall also include the necessary supporting calculations as an attachment.
 - v. 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 the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter 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 the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.
 - vi. Signature. (The transmittal letter shall be signed in accordance with Attachment D, section V.B.)
- d. Annual SMRs shall include all new monitoring results obtained since the last SMR was submitted. If the analytical data for samples collected during last quarter of a year are unavailable for incorporation into that annual SMR, then the Discharger shall propose in the transmittal letter a date when it will complete the annual report with the missing data and shall submit those data by that date.
- e. If the Discharger monitors any pollutant more frequently than required by this Order, the Discharger shall include the results of such monitoring in the calculations and reporting for the applicable SMR.
- f. Comprehensive discussion of performance and compliance. (This summary shall include 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. Submittals required by Provisions VI.C.3 and VI.C.4 of the Order.

3. Monitoring Periods. Monitoring periods for all required monitoring shall be completed as set forth in the table below:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Continuous	Effective date of Authorization to Discharge	All times while the facility is discharging
1/Day	Effective date of Authorization to Discharge	Midnight through 11:59 p.m.
1/Week	First Sunday following (or on) effective date of Authorization to Discharge	Sunday through Saturday
1/Month	First day of calendar month following (or on) effective date of Authorization to Discharge	First day of calendar month through last day of calendar month
1/ Quarter	First day of calendar quarter following (or on) effective date of Authorization to Discharge	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
2/Year	Closest January 1 or July 1 before or after effective date of Authorization to Discharge ^[1]	January 1 through June 30 July 1 through December 31
Once	Effective date of Authorization to Discharge	Once such that the results are reported with the new NOI form required on the first page of the Order

Footnote:

^[1] Monitoring conducted during the term of the previous order may be used to satisfy monitoring required with this sampling frequency.

4. RL and MDL Reporting. The Discharger 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. The Discharger may select any analytical methods described in 40 C.F.R. part 136; however, the RLs shall be below applicable water quality objectives (see Fact Sheet Table F-3) and any effluent limitations. Otherwise, RLs shall be as low as possible. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm 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's MDL shall be reported as "Not Detected" or "ND."

- d. The Discharger shall instruct laboratories to establish calibration standards so that the lowest calibration standard is at or below the minimum level (ML) specified below (or its equivalent if there is differential treatment of samples relative to calibration standards). At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. The table below lists MLs for priority pollutants:

Table E-5. Minimum Levels

CTR No.	Pollutant/Parameter	Suggested Analytical Method [1]	Minimum Level for Treated Filter Backwash Wastewater Discharges (µg/l)
1	Antimony	204.2	5
2	Arsenic	206.3	2
3	Beryllium		2
4	Cadmium	200 or 213	0.5
5a	Chromium (III)	SM 3500	
5b	Chromium (VI)	SM 3500	5
	Chromium (total) ^[2]	SM 3500	2
6	Copper	200.9	10
7	Lead	200.9	2
8	Mercury	245.1, 245.7, or 1631	0.002
9	Nickel	249.2	50
10	Selenium	200.8 or SM 3114B or C	2
11	Silver	272.2	2
12	Thallium	279.2	1
13	Zinc	200 or 289	20
14	Cyanide	SM 4500 CN ⁻ C or I	5
15	Asbestos	0100.2	
16	2,3,7,8-TCDD (Dioxin)	1613	
17	Acrolein	603	5
18	Acrylonitrile	603	2
19	Benzene	602	0.5
33	Ethylbenzene	602	2
39	Toluene	602	2
20	Bromoform	601	2
21	Carbon Tetrachloride	601	0.5
22	Chlorobenzene	601	2
23	Chlorodibromomethane	601	0.5
24	Chloroethane	601	2
25	2-Chloroethylvinyl Ether	601	1
26	Chloroform	601	2
75	1,2-Dichlorobenzene	601	2
76	1,3-Dichlorobenzene	601	2
77	1,4-Dichlorobenzene	601	2
27	Dichlorobromomethane	601	0.5
28	1,1-Dichloroethane	601	1
29	1,2-Dichloroethane	601	0.5
30	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5

CTR No.	Pollutant/Parameter	Suggested Analytical Method [1]	Minimum Level for Treated Filter Backwash Wastewater Discharges (µg/l)
31	1,2-Dichloropropane	601	0.5
32	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5
34	Methyl Bromide or Bromomethane	601	2
35	Methyl Chloride or Chloromethane	601	2
36	Methylene Chloride or Dichloromethane	601	2
37	1,1,2,2-Tetrachloroethane	601	0.5
38	Tetrachloroethylene	601	0.5
40	1,2-Trans-Dichloroethylene	601	1
41	1,1,1-Trichloroethane	601	2
42	1,1,2-Trichloroethane	601	0.5
43	Trichloroethene	601	2
44	Vinyl Chloride	601	0.5
45	2-Chlorophenol	604	5
46	2,4-Dichlorophenol	604	5
47	2,4-Dimethylphenol	604	2
48	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10
49	2,4-Dinitrophenol	604	5
50	2-Nitrophenol	604	10
51	4-Nitrophenol	604	10
52	3-Methyl-4-Chlorophenol	604	5
53	Pentachlorophenol	604	1
54	Phenol	604	1
55	2,4,6-Trichlorophenol	604	10
56	Acenaphthene	610 HPLC	1
57	Acenaphthylene	610 HPLC	10
58	Anthracene	610 HPLC	10
60	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	5
61	Benzo(a)Pyrene	610 HPLC	2
62	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC	10
63	Benzo(ghi)Perylene	610 HPLC	5
64	Benzo(k)Fluoranthene	610 HPLC	2
74	Dibenzo(a,h)Anthracene	610 HPLC	0.1
86	Fluoranthene	610 HPLC	10
87	Fluorene	610 HPLC	10
92	Indeno(1,2,3-cd) Pyrene	610 HPLC	0.05
100	Pyrene	610 HPLC	10
68	Bis(2-Ethylhexyl)Phthalate	606 or 625	5
70	Butylbenzyl Phthalate	606 or 625	10
79	Diethyl Phthalate	606 or 625	10
80	Dimethyl Phthalate	606 or 625	10

CTR No.	Pollutant/Parameter	Suggested Analytical Method [1]	Minimum Level for Treated Filter Backwash Wastewater Discharges (µg/l)
81	Di-n-Butyl Phthalate	606 or 625	10
84	Di-n-Octyl Phthalate	606 or 625	10
59	Benzidine	625	5
65	Bis(2-Chloroethoxy)Methane	625	5
66	Bis(2-Chloroethyl)Ether	625	1
67	Bis(2-Chloroisopropyl)Ether	625	10
69	4-Bromophenyl Phenyl Ether	625	10
71	2-Chloronaphthalene	625	10
72	4-Chlorophenyl Phenyl Ether	625	5
73	Chrysene	625	5
78	3,3'-Dichlorobenzidine	625	5
82	2,4-Dinitrotoluene	625	5
83	2,6-Dinitrotoluene	625	5
85	1,2-Diphenylhydrazine ^[3]	625	1
88	Hexachlorobenzene	625	1
89	Hexachlorobutadiene	625	1
90	Hexachlorocyclopentadiene	625	5
91	Hexachloroethane	625	1
93	Isophorone	625	1
94	Naphthalene	625	10
95	Nitrobenzene	625	10
96	N-Nitrosodimethylamine	625	5
97	N-Nitrosodi-n-Propylamine	625	5
98	N-Nitrosodiphenylamine	625	1
99	Phenanthrene	625	5
101	1,2,4-Trichlorobenzene	625	1
102	Aldrin	608	0.005
103	α-BHC	608	0.01
104	β-BHC	608	0.005
105	γ-BHC (Lindane)	608	0.02
106	δ-BHC	608	0.005
107	Chlordane	608	0.1
108	4,4'-DDT	608	0.01
109	4,4'-DDE	608	0.05
110	4,4'-DDD	608	0.05
111	Dieldrin	608	0.01
112	Endosulfan (alpha)	608	0.02
113	Endosulfan (beta)	608	0.01
114	Endosulfan Sulfate	608	0.05
115	Endrin	608	0.01
116	Endrin Aldehyde	608	0.01
117	Heptachlor	608	0.01
118	Heptachlor Epoxide	608	0.01
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608 and 1668C ^[4]	0.5
126	Toxaphene	608	0.5

Footnotes:

- ^[1] The suggested method is the U.S. EPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another U.S. EPA approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Dischargers have the discretion to use any standard method.
- ^[2] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).
- ^[3] Measurement for 1,2-diphenylhydrazine may use azobenzene as a screen. If azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2 diphenylhydrazine.
- ^[4] The Discharger shall use U.S. EPA Method 608 for PCBs monitoring. Compliance with effluent limitations shall be evaluated using U.S. EPA Method 608.

5. Compliance Determination

- a.** Compliance with effluent limitations shall be determined using sample reporting protocols defined above and in the Fact Sheet and Attachments A and D. For purposes of reporting and administrative enforcement, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of a pollutant is greater than the effluent limitation and greater than or equal to the reporting level (RL).
- b.** When determining compliance with an average effluent limitation and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger 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, 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.

C. Discharge Monitoring Reports (DMRs)

- 1.** At any time during the term of this Order, the State Water Board or Regional Water Board may notify and require the Discharger to electronically submit DMRs.
- 2.** Once notified by the State Water Board or Regional Water Board, the Discharger shall submit DMRs as required.

D. Violations and Unauthorized Discharges

- 1.** Within 24 hours of becoming aware of a violation of this Order, the Discharger shall report by telephone to the Regional Water Board staff who oversees implementation of this Order (and who will be identified in the Authorization to Discharge).
- 2.** The Discharger shall report spills to the California Office of Emergency Services (telephone 800-852-7550) only when spills are in accordance with applicable reportable quantities for hazardous materials.

- 3.** If requested by Regional Water Board staff, the Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification. A report submitted electronically is acceptable. The written report shall include the following:
- a.** Date and time of violation or spill, and duration if known;
 - b.** Location of violation or spill (street address or description of location);
 - c.** Nature of violation or material spilled;
 - d.** Quantity of any material involved;
 - e.** Receiving water body affected, if any;
 - f.** Cause of violation or spill;
 - g.** Estimated size of affected area;
 - h.** Observed impacts to receiving waters (e.g., oil sheen, fish kill, or water discoloration);
 - i.** Corrective actions taken to correct violation or to contain, minimize, or clean up spill;
 - j.** Future corrective actions planned to prevent recurrence and implementation schedule;
 - k.** Persons or agencies notified.

ATTACHMENT F - FACT SHEET

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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 California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) incorporates this Fact Sheet as its findings supporting the issuance of the Order.

I. PERMIT INFORMATION

- A. This Order regulates discharges of treated filter backwash from drinking water treatment facilities to inland surface waters. It reissues NPDES General Permit No. CAG382001, which the Regional Water Board reissued through Order No. R2-2009-0033 (previous order) on April 8, 2009. The previous order was effective from March 1, 2010, until the effective date of this Order.
- B. Site owners and operators that complete a Notice of Intent (NOI) and apply for an Authorization to Discharge under this Order, and that are granted such authorization, are hereinafter called “Dischargers.” For purposes of this Order, references to “discharger” or “permittee” in applicable federal and State laws, regulations, plans, and policies are held to be equivalent to references to Discharger herein.

II. FACILITY DESCRIPTION

A. Filter Backwash Treatment and Discharges

- 1. **Description.** Drinking water filter facilities normally include coagulation/flocculation, sedimentation, filtration, and disinfection processes. Filtration is used to clarify the source water and improve taste by removing particles from the water, such as clay, silt, natural organic matter and micro-organisms. Filter backwash is generated when the filters are washed to remove accumulated solids through the use of reverse pressure and water flow. Backwashing involves the following general steps, and may vary from facility to facility:
 - a. The filters are taken off line. Then each filter is spray washed with water. This forces the accumulated particles on the filter into suspension.
 - b. After the wash cycle occurs, backwashing begins and previously filtered water flows through the filter in the reverse direction. Most or all of the accumulated particles are flushed out.
 - c. The filter is then rewashed (filter-to-waste) and put back on line.
 - d. Throughout this Order, the term “filter backwash” and “filter backwash wastewater” includes the water used to spray-wash, filter backwash, filter-to-waste (rewash), and any other settling basin sedimentation desludge decant water. The filter backwash wastewater flows into settling basins where the solids in the filter backwash settle out. Clarifiers may also be used to remove solids from filter backwash in place of, or in addition, to settling basins.
 - e. Depending on the chlorine content, the filter backwash decant from the settling basins or clarifiers may or may not undergo residual chlorine reduction before being discharged to an inland surface water.
 - f. Chlorine reduction at some drinking water filter facilities can involve storing filter backwash in holding tanks to allow for residual chlorine to naturally decay prior to

discharge. Retention times vary. Other drinking water filter facilities use dechlorination chemicals to reduce chlorine concentrations in the filter backwash to within discharge limits prior to discharge.

B. General Description of Coverage

1. This Order covers the discharge from settling basins or clarifiers of treated dechlorinated filter backwash to inland surface waters. At least two dischargers are anticipated to seek coverage under this Order. The dischargers include (1) the San Francisco Public Utilities Commission (SFPUC), Harry Tracy Water Treatment Plant and associated San Andreas Reservoir; and (2) the City of Napa (Napa), Hennessey Water Treatment Plant and associated Lake Hennessey.
2. This Order does not cover discharges that can be covered under the statewide General NPDES Permit for Drinking Water System Discharges (Order WQ 2014-0194-DWQ, NPDES No. CAG140001). For these discharges, dischargers must seek coverage under CAG140001. This is because the State Water Board newly issued CAG140001 with the intent to establish statewide consistency in the regulation of planned and unplanned low threat discharges that are short-term or seasonal, or unplanned short-term discharges, from drinking water systems including drinking water filter facilities. The Regional Water Board's previous order had covered some of the same discharges as are now under the scope of CAG140001. However, continuing to do so in this Order would have a high potential to create inconsistent regulation. Therefore, this Order is narrower in scope than the previous order and covers only treated filter backwash discharges. This Order is necessary because CAG140001 does not currently apply to planned filter backwash discharges.

C. Discharge Points and Receiving Waters

Receiving waters consist of inland surface waters of the San Francisco Bay Region. Because drinking water filter facilities are located in the upper parts of watersheds, they typically discharge to inland surface waters (e.g., freshwater), such as reservoirs or lakes or creeks. The NOI Form in Attachment B requires each discharger to specify its discharge locations and to provide a map or diagram indicating the discharge path to surface waters.

D. Existing Requirements

The previous order included the following effluent limitations:

Table F-1. Previous Group A Effluent Limitations (Not Short-Term or Seasonal)

Constituents	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Total Suspended Solids (TSS)	mg/L	--	45	30	--	--
Settleable Matter ^[1]	mL/L-hr	0.2	--	0.1	--	--
pH ^[2]	standard units	--	--	--	8.5	6.5
Total Chlorine Residual ^[3]	mg/L	--	--	--	0.0	--
Bromoform	µg/L	8.6	--	4.3	--	--
Dichlorobromomethane	µg/L	1.1	--	0.56	--	--
Chlorodibromomethane	µg/L	0.80	--	0.40	--	--
Copper ^[4]	µg/L	9.4	--	4.7	--	--
Zinc	µg/L	90	--	45	--	--
Acute Toxicity				[5]		

Abbreviations:

mg/L = milligrams per liter

µg/L = micrograms per liter

mL/L-hr = milliliters per liter-hour

Footnotes:^[1] The settleable matter (i.e., settleable solids) limit only applied to “on-site storage facility dewatering effluent.”^[2] Exceedance of the pH limit did not constitute a violation of the previous order if a Discharger could demonstrate that the discharge did not cause natural background pH to be depressed below 6.5 nor raised above 8.5, or if outside this range, the receiving water had not been altered from normal ambient pH by more than 0.5 standard units.^[3] The Regional Water Board has determined that residual chlorine field test kits and analyzers (EPA-approved Standard Methods 4500-Cl F and G) have a minimum reporting level of up 0.08 mg/L; therefore, the Discharger will be considered out of compliance with the total chlorine residual limit if the effluent concentration is greater than 0.08 mg/L.^[4] For discharges to fresh water with 150 mg/L hardness as calcium carbonate or greater, the discharge limitations for copper shall be an AMEL of 9.8 ug/L and an MDEL of 20 ug/L.^[5] Representative samples of the effluent shall meet the following limits for acute toxicity:

Continuous discharge:

a. The survival of bioassay test organisms in 96-hour static renewal bioassays of undiluted effluent shall be:

- i. a 3-sample median value of not less than 90 percent survival; and
- ii. a single-sample maximum of not less than 70 percent survival.

b. These acute toxicity limits are further defined as follows:

i. a 3-sample median limit: 3-sample median is defined as follows: if one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.

ii. Single-sample maximum: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

Intermittent discharge: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent i represents a violation of this effluent limit.

Continuous discharge: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

Table F-2. Previous Group B Effluent Limitations (Short Term or Seasonal Discharges)

Constituents	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
TSS	mg/L	--	45	30	--	--
Settleable Matter ^[1]	mL/L-hr	0.2	--	0.1	--	--
pH ^[2]	standard units	--	--	--	8.5	6.5
Total Chlorine Residual ^[3]	mg/L	--	--	--	0.0	--

TTHMs	mg/L	--	--	0.1	--	--
Zinc	µg/L	90	--	45	--	--
Acute Toxicity	[4]					

Abbreviations:

mg/L = milligrams per liter
µg/L = micrograms per liter
mL/L-hr = milliliters per liter-hour

Footnotes:

- [1] The settleable matter (i.e., settleable solids) limit only applied to “on-site storage facility dewatering effluent.”
- [2] Exceedance of the pH limit did not constitute a violation of the previous order if a Discharger could demonstrate that the discharge did not cause natural background pH to be depressed below 6.5 nor raised above 8.5, or if outside this range, the receiving water had not been altered from normal ambient pH by more than 0.5 standard units.
- [3] The Regional Water Board has determined that residual chlorine field test kits and analyzers (EPA-approved Standard Methods 4500-Cl F and G) have a minimum reporting level of up 0.08 mg/L; therefore, the Discharger will be considered out of compliance with the total chlorine residual limit if the effluent concentration is greater than 0.08 mg/L.
- [4] Representative samples of the effluent shall meet the following limits for acute toxicity:
- Continuous discharge:
- The survival of bioassay test organisms in 96-hour static renewal bioassays of undiluted effluent shall be:
 - a 3-sample median value of not less than 90 percent survival; and
 - a single-sample maximum of not less than 70 percent survival.
 - These acute toxicity limits are further defined as follows:
 - a 3-sample median limit: 3-sample median is defined as follows: if one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.
 - Single-sample maximum: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit. Intermittent discharge: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

E. Compliance Summary

Under the previous order, dischargers anticipated to be covered under this Order (Napa and SFPUC) had, in total, violated effluent limitations 30 times. Of the 30 effluent limit violations, 2 involved copper, 15 involved dichlorobromomethane, 3 involved pH, 4 involved total residual chlorine, 1 involved total suspended solids, and 5 involved acute toxicity. These violations are not anticipated to be a significant problem under this Order because both Napa and SFPUC upgraded their facilities in 2014. Since the upgrades, 1 toxicity and 2 copper violations were reported. The toxicity violations were due to final adjustments necessary to polymer dosing from the treatment system upgrade. The copper violations were due to startup activities related to the upgrades or past use of copper sulfate in the reservoir to control algae. In any case, the filter facility and treatment system for filter backwash would remove more copper from the reservoir than is put back into the reservoir. The Regional Water Board completed enforcement actions for 20 of the 30 effluent limit violations. The other 10 violations are pending review and resolution.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**A. Legal Authorities**

This Order serves as Waste Discharge Requirements (WDRs) pursuant to California 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 to surface waters from enrolled facilities.

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).

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 No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Receiving water beneficial uses include the following:

- Agricultural Supply
- Areas of Special Biological Significance
- Cold Freshwater Habitat
- Freshwater Replenishment
- Groundwater Recharge
- Industrial Service Supply
- Fish Migration
- Municipal and Domestic Supply
- Navigation
- Industrial Process Supply
- Preservation of Rare or Endangered Species
- Water Contact Recreation
- Non-Contact Water Recreation
- Fish Spawning
- Warm Freshwater Habitat
- Wildlife Habitat

2. 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.

3. 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.

4. Safe Clean Water. In compliance with Water Code section 106.3, it is State policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring dischargers to meet applicable water quality objectives, including maximum contaminant levels

designed to protect human health, and to ensure that receiving water is safe for domestic use. As explained in Fact Sheet section IV.C.3.d, limits are established if there is a reasonable potential for treated filter backwash discharge to cause or contribute to exceedance of maximum contaminant levels.

- 5. 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 No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," which is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.
- 6. 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.
- 7. Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 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 Dischargers are responsible for meeting all applicable Endangered Species Act requirements.

D. Impaired Waters on CWA 303(d) List

In July 2015, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters 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.

Inland surface waters are listed as impaired for the following: chlordane, coliform bacteria, DDT (dichlorodiphenyltrichloroethane), diazinon, dieldrin, heptachlor epoxide, low dissolved oxygen, mercury, nickel, nutrient/eutrophication biological indicators, nutrients, organic enrichment/low dissolved oxygen, pathogens, PCBs (polychlorinated biphenyls), pH, pyrethroids, sediment toxicity, sedimentation/siltation, selenium, temperature, toxaphene, toxicity, and trash.

Treated filter backwash discharges that would be authorized under this Order are not expected to be a measurable source of the pollutants listed above and thus will not contribute to the impairments. Based on representative data on treated filter backwash shown in Fact Sheet section IV.C.3, the

concentration of chlordane, dieldrin, heptachlor epoxide, mercury, nickel, and selenium PCBs, and/or toxaphene have not been detected above the lowest applicable water quality objectives.

Coliform bacteria, low dissolved oxygen, nutrient/eutrophication biological indicators, nutrients, organic enrichment/low dissolved oxygen, and pathogens are not expected to be in treated filter backwash discharges because the source water used for drinking water is typically of high quality with very low levels of these pollutants. Moreover, disinfection at the drinking water filter facilities would further reduce levels of pathogenic and organic compounds (nutrients) and any residues would remain with the sediments settled from the filter backwash prior to discharge.

For pH and toxicity, this Order specifies limits for pH and toxicity that will ensure that the discharges do not result in exceedance of objectives. While there was a reported effluent toxicity violation at the SFPUC facility in 2015, it is possible that the cause was due to excess coagulation polymers from startup of facility upgrades, which is in the process of being corrected as of the development of this Order. Also, a biologist's surveys after the discharges found no adverse impacts to the receiving water from the discharges.

This Order specifies limits on TSS and settleable matter and prohibits bypass of systems that remove sediments from discharges. These requirements will ensure that discharges will not contribute to sediment toxicity and sedimentation/siltation in inland waters.

For temperature and trash, filter backwash discharges will not contribute to these impairments because heat is not used in the processes, and, if there is any trash from source waters, the trash would be screened out prior to or as part of the filter facilities.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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. Discharge Prohibitions

1. Prohibitions in this Order

- a. Discharge Prohibition III.A.** (No discharge other than as described in NOI and Authorization to Discharge): This prohibition is based on 40 C.F.R. section 122.21(a), duty to apply, and Water Code section 13260, which requires filing an application and Report of Waste Discharge before discharge can occur. Discharges not described in an NOI and Authorization to Discharge are prohibited.
- b. Discharge Prohibition III.B.** (No bypassing settling basins or clarifiers). This prohibition requires that discharges not bypass settling basins or clarifiers because these units are the primary form of pollutant control at the facilities this Order covers. These

units will be identified in the NOI and will be considered as part of granting discharge authorization. Bypassing could greatly reduce discharge quality. This prohibition is based on 40 C.F.R. section 122.41(m), which generally prohibits bypasses (see Attachment D, section I.G). This prohibition is revised to be more specific and clearer owing to the narrower scope of this Order from the previous order. This Order covers only discharges of treated filter backwash; the previous order had covered all other discharges from drinking water treatment plants that could have included other forms of treatment.

2. Exception to Shallow Water Discharge Prohibition

Basin Plan Discharge Prohibition 1 prohibits discharge of “any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water... .” This prohibition is intended to provide an added degree of protection from the continuous effect of discharges and provide a buffer against the effects of abnormal discharges caused by temporary upsets or malfunctions. As explained in Basin Plan section 4.2, the Regional Water Board reviews requests for exceptions to this prohibition based in part on the reliability of a discharger’s system in preventing inadequately treated wastewater from being discharged to the receiving water. Basin Plan section 4.2 allows exceptions when an inordinate burden would be placed on a discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means.

Treated filter backwash discharges from drinking water filter facilities are not continuous and not subject to upset. This Basin Plan prohibition was intended to prevent the effects from treatment plant upsets. In any case, providing an initial dilution of at least 10:1, and/or transporting the discharges many miles to a tidal waterbody, would be impracticable for this type of discharge because these discharges are located in upper parts of watersheds and discharge to shallow streams. Construction of diffuser systems is not practical in shallow streams; some of which also may not flow naturally in summer months. Transport of the discharge to tidal waters would be cost prohibitive since it would require new piping through many miles of urban developed areas. Thus, compliance with the prohibition would constitute an inordinate burden for dischargers. Moreover, Provisions VI.C.3 and VI.C.4.a of the Order, requiring development and implementation of plans to ensure proper operation and maintenance and best management practices to control all potential pollutants, provide an equivalent level of water quality protection.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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 that technology-based effluent limitations be established based on several levels of control:

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

- b. Best available technology economically achievable (BAT).** BAT represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT).** BCT represents the control from existing industrial point sources of conventional pollutants, including biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. BCT standards are established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- d. New source performance standards (NSPS).** NSPS represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines, and standards representing application of BPT, BAT, BCT, and 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 U.S. EPA has not promulgated effluent limitations, guidelines, and standards. When best professional judgment is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3. No BCT and BAT need to be developed for total suspended solids and settleable matter because Basin Plan Table 4-2 sets the total suspended solids and settleable matter limits as the technology standard in the region for treatment facilities whose primary purpose is to control solids consistent with federal requirements.

2. Applicable Limitations

a. Filter Backwash Discharges

- i. Total Suspended Solids.** Elevated levels of suspended solids in filter backwash may occur if the backwash is not treated properly. To ensure continued proper treatment, this Order retains the effluent limitations for TSS of an average monthly effluent limit (AMEL) of 30 mg/L and an average weekly effluent limit (AWEL) of 45 mg/L from the previous order. The suspended solids limitations are based on Basin Plan Table 4-2. While intended for all sewage treatment facilities in the San Francisco Bay Region, the Basin Plan provides that the limits may also be applied to other non-sewage discharges.
- ii. Settleable Matter.** This Order retains the effluent limitations for settleable matter of an AMEL of 0.1 mL/L/hr and a maximum daily effluent limit (MDEL) of 0.2 mL/L/hr. The settleable matter limitations are needed because the filter backwash wastewaters are normally treated by settling. In the Regional Water Board best professional judgment, Basin Plan Table 4-2 provides sufficient technology-based

controls for settleable matter. As explained above, no BCT and BAT need to be developed for settleable matter.

Settleable matter effluent limitations are needed to assure treatment effectiveness. In the previous order, the effluent limitations were footnoted to apply only to onsite storage facility dewatering operations. This footnote was incorrect because the fact sheet of the previous order indicated that backwash water was treated to remove solids and thus settleable “solids” limits from the Basin Plan are technically achievable. Therefore, these limits are appropriate and consistent with Basin Plan Table 4-2.

- iii. **Chlorine Residual.** The instantaneous maximum effluent limitation of 0.0 mg/L for total chlorine residual is retained from the previous order. This limitation reflects Basin Plan Table 4-2 requirements.

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

This Order contains water quality-based effluent limitations (WQBELs) that implement water quality objectives 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 uses of receiving waters as specified in the Basin Plan. This Order imposes WQBELs for pollutants with reasonable potential to cause or contribute to exceedances of water quality standards.

2. Beneficial Uses and Water Quality Criteria and Objectives

Fact Sheet section III.C.1 identifies the potential beneficial uses of the receiving waters for discharges subject to this Order. Water quality criteria and objectives to protect these beneficial uses are described below:

- a. **Basin Plan.** The Basin Plan specifies numeric water quality objectives for many pollutants to protect aquatic life and municipal drinking water supplies (see Basin Plan sections 3.3.21 and 3.3.22). It also specifies narrative water quality objectives, such as the narrative toxicity objective, “All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.”

- b. CTR.** The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of “water and organisms” and others are for consumption of “organisms only.” Waters with the municipal or domestic supply beneficial use designation are subject to the “water and organisms” criteria.
- c. NTR.** The NTR establishes numeric aquatic life criteria for a number of pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the San Joaquin-Sacramento River Delta.
- d. Receiving Water Salinity.** Basin Plan section 4.6.2 (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria 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 criteria 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 salt or freshwater objectives (the latter calculated based on ambient hardness) for each substance.

Receiving waters for the discharges this Order are inland freshwaters. Thus, the reasonable potential analyses and WQBELs are based on freshwater criteria, and salt water criteria are not applicable.

- e. Receiving Water Hardness.** Some freshwater objectives for metals are hardness dependent (as hardness increases, the toxicity of certain metals decreases). Adequate receiving water hardness data are available for the anticipated receiving waters under this Order. Napa collected 5 hardness samples from Lake Hennessey, and SFPUC collected 196 hardness samples from the San Andreas Reservoir. The geometric mean of aggregated Napa and SFPUC hardness data was 60 mg/L, which was used to calculate the freshwater water quality objectives.
- f. Site Specific Translators.** NPDES regulations at 40 C.F.R. 122.45(c) require that effluent limitations for metals be expressed as total recoverable metal. Since water quality objectives for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon affect the form of metal (dissolved, non-filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form of the metal is more available and more toxic to aquatic life than non-filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

This Order covers discharges to various receiving waters; therefore, site-specific conditions vary. CTR default translators were used for all metals.

This Order covers discharges only to inland freshwaters; therefore, the copper water quality objectives listed in Basin Plan Table 3-4 were used.

3. Need for WQBELs

Assessing whether a pollutant has reasonable potential to exceed a water quality objective is the fundamental step in determining whether a WQBEL is required.

- a. Methodology.** SIP section 1.3 sets forth the methodology used for priority pollutants to assess whether they have reasonable potential to exceed water quality objectives. In this Order, this methodology is also applied to non-priority pollutants as guidance in determining reasonable potential. 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:
 - i. 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).
 - ii. 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.
 - iii. Trigger 3** is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.
- b. Effluent Data.** Data from two surface water filter facilities were used to evaluate the need to develop effluent limitations for this Order. SFPUC, which operates the Harry Tracy Water Treatment Plant and associated San Andreas Reservoir, and Napa, which operates the Hennessey Water Treatment Plant and associated Lake Hennessey, submitted effluent monitoring data from the previous order term. Both facilities upgraded their operations in 2014, and, as a result, the data from 2014 and 2015 more accurately reflect current facility operations and discharges. The reasonable potential analysis was conducted using these more representative effluent data.
- c. Ambient Background Data.** The SIP states that, when calculating WQBELs, ambient background concentrations are to be either the observed maximum ambient water column concentrations or, for water quality objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

San Andreas Reservoir and Lake Hennessey ambient receiving water data were used to represent background conditions for surface water filter facility discharges to the San Andreas Reservoir and Lake Hennessey – both of which are freshwater receiving waters.
- d. Reasonable Potential Analyses.** Quantitative reasonable potential analyses were conducted using data from two known facilities that would seek coverage under this Order. The effluent monitoring data were aggregated and the maximum values were used. The MECs and most stringent applicable water quality criteria are presented in the

following tables, along with the analysis results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable criteria for all pollutants, and monitoring data are unavailable for others. When additional data become available, further analysis will be conducted to determine whether WQBELs are necessary. The receiving water monitoring data were also aggregated, and the maximum values were used in the background column in Table F-3.

Based on representative data from 2014-15 subsequent to facility upgrades, the discharges no longer demonstrated reasonable potential to cause or contribute to an exceedance of a water quality standard for the following pollutants: bromoform, dichlorobromomethane, chlorodibromomethane, and zinc. As a result, the effluent limitations, for the above pollutants, from the previous order term are no longer necessary, but monitoring of these pollutants will continue to be required to inform the next permit reissuance.

Copper demonstrates reasonable potential and Basin Plan Table 4-3 also requires whole effluent acute toxicity limit.

Table F-3. Reasonable Potential Analysis – Treated Filter Backwash Discharges

CTR No.	Pollutant ^[1]	Unit	Governing Criteria	MEC or Minimum DL ^[1,2]	Background	Result ^[3]
1	Antimony	µg/L	6	NA	NA	U
2	Arsenic	µg/L	50	3.21	2.4	No
3	Beryllium	µg/L	4	NA	NA	U
4	Cadmium	µg/L	1.6	<0.009	0.023	No
5a	Chromium (III)	µg/L	50	NA	NA	U
5b	Chromium (VI)	µg/L	11	1.78	0.214	No
6	Copper	µg/L	6	32.5	1.0	Yes
7	Lead	µg/L	1.7	1.26	0.016	No
8	Mercury	µg/L	0.025	0.00347	0.0011	No
9	Nickel	µg/L	33.9	3.5	0.8	No
10	Selenium	µg/L	5	<0.179	0.0249	No
11	Silver	µg/L	1.7	<0.003	0.00338	No
12	Thallium	µg/L	1.7	NA	NA	U
13	Zinc	µg/L	78	6.05	0.4	No
14	Cyanide	µg/L	5.2	NA	NA	U
15	Asbestos	Fibers/L	7,000,000	NA	NA	U
16	2,3,7,8-TCDD	µg/L	1.3x10-8	NA	NA	U
17	Acrolein	µg/L	320	NA	NA	U
18	Acrylonitrile	µg/L	0.059	NA	NA	U
19	Benzene	µg/L	1.0	NA	NA	U
20	Bromoform	µg/L	4.3	<0.5	0.5	No
21	Carbon Tetrachloride	µg/L	0.25	NA	NA	U
22	Chlorobenzene	µg/L	70	NA	NA	U
23	Chlorodibromomethane	µg/L	0.401	<0.5	0.1	No
24	Chloroethane	µg/L	No Criteria	NA	NA	U
25	2-Chloroethylvinyl Ether	µg/L	No Criteria	NA	NA	U
26	Chloroform	µg/L	No Criteria	5	0.5	No
27	Dichlorobromomethane	µg/L	0.56	<0.5	0.1	No
28	1,1-Dichloroethane	µg/L	5	NA	NA	U
29	1,2-Dichloroethane	µg/L	0.38	NA	NA	U

CTR No.	Pollutant ^[1]	Unit	Governing Criteria	MEC or Minimum DL ^[1,2]	Background	Result ^[3]
30	1,1-Dichloroethylene	µg/L	0.057	NA	NA	U
31	1,2-Dichloropropane	µg/L	0.52	NA	NA	U
32	1,3-Dichloropropylene	µg/L	0.5	NA	NA	U
33	Ethylbenzene	µg/L	300	NA	NA	U
34	Methyl Bromide	µg/L	48	NA	NA	U
35	Methyl Chloride	µg/L	No Criteria	NA	NA	U
36	Methylene Chloride	µg/L	4.7	NA	NA	U
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	NA	NA	U
38	Tetrachloroethylene	µg/L	0.8	NA	NA	U
39	Toluene	µg/L	150	NA	NA	U
40	1,2-Trans-Dichloroethylene	µg/L	10	NA	NA	U
41	1,1,1-Trichloroethane	µg/L	200	NA	NA	U
42	1,1,2-Trichloroethane	µg/L	0.6	NA	NA	U
43	Trichloroethylene	µg/L	2.7	NA	NA	U
44	Vinyl Chloride	µg/L	0.5	NA	NA	U
45	2-Chlorophenol	µg/L	120	NA	NA	U
46	2,4-Dichlorophenol	µg/L	93	NA	NA	U
47	2,4-Dimethylphenol	µg/L	540	NA	NA	U
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	NA	NA	U
49	2,4-Dinitrophenol	µg/L	70	NA	NA	U
50	2-Nitrophenol	µg/L	No Criteria	NA	NA	U
51	4-Nitrophenol	µg/L	No Criteria	NA	NA	U
52	3-Methyl-4-Chlorophenol	µg/L	No Criteria	NA	NA	U
53	Pentachlorophenol	µg/L	0.28	NA	NA	U
54	Phenol	µg/L	21,000	NA	NA	U
55	2,4,6-Trichlorophenol	µg/L	2.1	NA	NA	U
56	Acenaphthene	µg/L	1,200	NA	NA	U
57	Acenaphthylene	µg/L	No Criteria	NA	NA	U
58	Anthracene	µg/L	9,600	NA	NA	U
59	Benzidine	µg/L	0.00012	NA	NA	U
60	Benzo(a)Anthracene	µg/L	0.0044	NA	NA	U
61	Benzo(a)Pyrene	µg/L	0.0044	NA	NA	U
62	Benzo(b)Fluoranthene	µg/L	0.0044	NA	NA	U
63	Benzo(ghi)Perylene	µg/L	No Criteria	NA	NA	U
64	Benzo(k)Fluoranthene	µg/L	0.0044	NA	NA	U
65	Bis(2-Chloroethoxy)Methane	µg/L	No Criteria	NA	NA	U
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	NA	NA	U
67	Bis(2-Chloroisopropyl)Ether	µg/L	1,400	NA	NA	U
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	NA	NA	U
69	4-Bromophenyl Phenyl Ether	µg/L	No Criteria	NA	NA	U
70	Butylbenzyl Phthalate	µg/L	3,000	NA	NA	U
71	2-Chloronaphthalene	µg/L	1,700	NA	NA	U
72	4-Chlorophenyl Phenyl Ether	µg/L	No Criteria	NA	NA	U
73	Chrysene	µg/L	0.0044	NA	NA	U
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	NA	NA	U
75	1,2-Dichlorobenzene	µg/L	600	NA	NA	U
76	1,3-Dichlorobenzene	µg/L	400	NA	NA	U
77	1,4-Dichlorobenzene	µg/L	5	NA	NA	U
78	3,3-Dichlorobenzidine	µg/L	0.04	NA	NA	U

CTR No.	Pollutant ^[1]	Unit	Governing Criteria	MEC or Minimum DL ^[1,2]	Background	Result ^[3]
79	Diethyl Phthalate	µg/L	23,000	NA	NA	U
80	Dimethyl Phthalate	µg/L	313,000	NA	NA	U
81	Di-n-Butyl Phthalate	µg/L	2,700	NA	NA	U
82	2,4-Dinitrotoluene	µg/L	0.11	NA	NA	U
83	2,6-Dinitrotoluene	µg/L	No Criteria	NA	NA	U
84	Di-n-Octyl Phthalate	µg/L	No Criteria	NA	NA	U
85	1,2-Diphenylhydrazine	µg/L	0.04	NA	NA	U
86	Fluoranthene	µg/L	300	NA	NA	U
87	Fluorene	µg/L	1,300	NA	NA	U
88	Hexachlorobenzene	µg/L	0.00075	NA	NA	U
89	Hexachlorobutadiene	µg/L	0.44	NA	NA	U
90	Hexachlorocyclopentadiene	µg/L	50	NA	NA	U
91	Hexachloroethane	µg/L	1.9	NA	NA	U
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	NA	NA	U
93	Isophorone	µg/L	8.4	NA	NA	U
94	Naphthalene	µg/L	No Criteria	NA	NA	U
95	Nitrobenzene	µg/L	17	NA	NA	U
96	N-Nitrosodimethylamine	µg/L	0.00069	NA	NA	U
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	NA	NA	U
98	N-Nitrosodiphenylamine	µg/L	5	NA	NA	U
99	Phenanthrene	µg/L	No Criteria	NA	NA	U
100	Pyrene	µg/L	960	NA	NA	U
101	1,2,4-Trichlorobenzene	µg/L	5	NA	NA	U
102	Aldrin	µg/L	0.00013	NA	NA	U
103	alpha-BHC	µg/L	0.0039	NA	NA	U
104	beta-BHC	µg/L	0.014	NA	NA	U
105	gamma-BHC (Lindane)	µg/L	0.019	NA	NA	U
106	delta-BHC	µg/L	No Criteria	NA	NA	U
107	Chlordane	µg/L	0.00057	NA	NA	U
108	4,4-DDT	µg/L	0.00059	NA	NA	U
109	4,4-DDE	µg/L	0.00059	NA	NA	U
110	4,4-DDD	µg/L	0.00083	NA	NA	U
111	Dieldrin	µg/L	0.00014	NA	NA	U
112	alpha-Endosulfan	µg/L	0.056	NA	NA	U
113	beta-Endosulfan	µg/L	0.056	NA	NA	U
114	Endosulfan Sulfate	µg/L	110	NA	NA	U
115	Endrin	µg/L	0.036	NA	NA	U
116	Endrin Aldehyde	µg/L	0.76	NA	NA	U
117	Heptachlor	µg/L	0.00021	NA	NA	U
118	Heptachlor Epoxide	µg/L	0.0001	NA	NA	U
119-125	PCBs sum	µg/L	0.00017	NA	NA	U
126	Toxaphene	µg/L	0.0002	NA	NA	U

Footnotes:

- ^[1] This list contains the CTR priority pollutants and, when data are available, some other pollutants for which water quality objectives exist to protect municipal supply, groundwater recharge, and agricultural supply beneficial uses.
- ^[2] The Maximum Effluent Concentration (MEC) is the actual detected concentration unless preceded by a “<” sign, in which case the value shown is the minimum detection level (DL).
- ^[3] Results = Yes, if MEC ≥ WQC, B > WQC and MEC is detected, or Trigger 3;
= No, if MEC and B are < WQC or all effluent data are undetected;
= Unknown (U), if no criteria have been promulgated or there are insufficient data.

4. WQBELs Calculations

- a. Copper. The following table shows the WQBEL calculations for copper. These WQBELs were developed in accordance with the procedures specified in SIP section 1.4.

The allowance for intake credit-based and dilution credit-based limitations are based on the SIP sections 1.4.4 and 1.4.2. Compliance with these alternate limits are provided in Provisions VI.D and E of the Order with rationale in the corresponding section of this Fact Sheet.

Table F-4. WQBEL Calculations

Pollutant	Copper D=0	Copper D=2	Copper D=5	Copper D=9	Copper D=15
Units	µg/L	µg/L	µg/L	µg/L	µg/L
Basis and criteria type	Basin Plan Freshwater Quality Objective				
Criteria –Acute	8.7	8.7	8.7	8.7	8.7
Criteria –Chronic	6.0	6.0	6.0	6.0	6.0
SSO Criteria -Acute	----	----	----	----	----
SSO Criteria -Chronic	----	----	----	----	----
Water effects ratio (WER)	1	1	1	1	1
Lowest WQO	6.0	6.0	6.0	6.0	6.0
Site specific translator - MDEL	----	----	----	----	----
Site specific translator - AMEL	----	----	----	----	----
Dilution factor (D) (if applicable)	0.0	2.0	5.0	9.0	15.0
No. of samples per month	4.0	4.0	4.0	4.0	4.0
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	N	N
Applicable Acute WQO	8.7	8.7	8.7	8.7	8.7
Applicable Chronic WQO	6.0	6.0	6.0	6.0	6.0
HH criteria	1300	1300	1300	1300	1300
Background (Maximum concentration for aquatic life calculation)	0.0	1.0	1.0	1.0	1.0
Background (Average concentration for human health calculation)	0.0	1.0	1.0	1.0	1.0
Is the pollutant on the 303(d) list and bioaccumulative (Y/N)?	N	N	N	N	N
ECA acute	8.7	24.1	47.2	78.0	124.2
ECA chronic	6.0	16.0	31.0	51.0	81.0
ECA human health	1300.0	1300.0	1300.0	1300.0	1300.0
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	Y	Y	Y	Y	Y
Average of effluent data points	----	----	----	----	----
Standard deviation of effluent data points	----	----	----	----	----
CV (calculated)	N/A	N/A	N/A	N/A	N/A
CV (selected)	0.6	0.6	0.6	0.6	0.6
ECA acute mult99	0.321	0.321	0.321	0.321	0.321
ECA chronic mult99	0.527	0.527	0.527	0.527	0.527
LTA acute	2.8	7.7	15.2	25.0	39.9
LTA chronic	3.2	8.4	16.3	26.9	42.7
minimum of LTAs	2.8	7.7	15.2	25.0	39.9
AMEL mult95	1.55	1.55	1.55	1.55	1.55
MDEL mult99	3.11	3.11	3.11	3.11	3.11
AMEL (aq life)	4.3	12.0	23.5	38.8	61.8
MDEL(aq life)	8.7	24.1	47.1	77.9	124.0
MDEL/AMEL Multiplier	2	2	2	2	2
AMEL (human hlth)	1300	1300	1300	1300	1300

Pollutant	Copper D=0	Copper D=2	Copper D=5	Copper D=9	Copper D=15
MDEL (human hlth)	-----	-----	-----	-----	-----
minimum of AMEL for Aq. life vs HH	4.3	12.0	23.5	38.8	61.8
minimum of MDEL for Aq. Life vs HH	8.7	24.1	47.1	77.9	124.0
Previous order AMEL	N/A	N/A	N/A	N/A	N/A
Previous order MDEL	N/A	N/A	N/A	N/A	N/A
Final limit - AMEL	4.3	12.0	23.5	38.8	61.8
Final limit - MDEL	8.7	24.1	47.1	77.9	124.0

- b. Acute Toxicity.** The whole effluent acute toxicity effluent limit is based on the Basin Plan Section 3.3.18.

D. Effluent Limitation Considerations

- 1. Anti-backsliding.** The effluent limitations in this Order comply with anti-backsliding requirements because they are at least as stringent as those in the previous order, with some exceptions. These exceptions consist of the removal of effluent limits that were in the previous order for the following:

- a. **pH** - 40 C.F.R. section 122.44(l) provides that a permit may not contain less stringent requirements unless the circumstances on which the previous permit was based have changed since the time the permit was issued and would constitute cause for modification.

The circumstances have changed because the scope of this Order is narrower than that of the previous order, which covered a longer list of discharges including discharges from facilities that purposely elevated pH to control corrosion in the distribution system. Those types of discharges are not covered by this Order.

The pH in some surface waters can deviate naturally away from 6.5 to 8.5 on occasion due to factors such as precipitation, geology, and climate. The filter systems, including the filter backwash systems, do not provide for pH adjustment. Any change in pH occurs in the source waters to the facility and are not caused by any filtration of that water in the conveyance facility. Because pH control systems are subject to upset that can result in pH levels more harmful to aquatic life than the natural pH deviations such as due to precipitation and other climatic factors, to require the addition of pH control systems to meet the pH limits (1) would require implementation of additional measures to comply with the Basin Plan Prohibition 1 (see IV.A.2, above), and (2) could result in discharges that are more harmful to aquatic life. Therefore, such a requirement is unreasonable.

- b. **Bromoform, dichlorobromomethane, chlorodibromomethane, and zinc** - Based on 2014-15 representative effluent data, there is no reasonable potential for these pollutants to exceed water quality objectives. This is consistent with State Water Board Order No. WQ2001-16.

- 2. Antidegradation.** This Order is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. It continues the status quo with respect to the discharges authorized in the previous order with the following exceptions. Thus, this Order does not allow for a reduced level of treatment or increase effluent

limitations or increase in types of discharges. It holds Dischargers to the same performance. Therefore, there will be no change in water quality beyond the level authorized in the previous order, which is the baseline by which to measure whether degradation will occur. Therefore, further analysis and findings authorizing degradation are unnecessary.

- a. **Four Prohibitions Not Retained** - The previous order specified six prohibitions, and this Order specifies only two prohibitions from the previous order. Four of the previous order's prohibitions are not necessary. The following summarizes the basis for not retaining the four prohibitions:
 - i. Prohibition on bottom sediments from water storage facilities – This prohibition is not necessary because water storage facilities are to be covered under the Statewide General Permit for Drinking Water Systems CAG140001.
 - ii. Prohibition on onsite storage of oil, fuel, and any other chemical storage causing contamination of stormwater runoff and/or water and wastewater discharge – This prohibition is not necessary because this Order does not otherwise authorize discharge from onsite storage of oil, fuel, and any other chemicals, and such discharges are already prohibited by Prohibition 13 of the Basin Plan.
 - iii. Prohibition on discharges exceeding 2,200 hours per year at any one location – This prohibition is no longer necessary because this Order's requirements do not rely upon Resolution No. R2-2008-0101, which granted a categorical SIP exception for short term or seasonal discharges. Resolution No. R2-2008-0101 had defined "short-term or seasonal," to mean discharges not exceeding 2,200 hours per year. Because this Order implements the SIP without needing that categorical exception, the exception's 2,200 hours per year is also no longer needed.
 - iv. Prohibition on causing a condition of pollution, contamination, or nuisance is unnecessary because the receiving water limitations adequately address the prohibition.

3. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. This Order's technology-based requirements implement minimum applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

This Order's WQBELs 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. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. 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).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limits are based on the water quality objectives listed in Basin Plan Chapter 3 and are intended to ensure that receiving waters meet water quality standards in accordance with the CWA and regulations adopted thereunder. The receiving water limitations from the previous order on turbidity are being carried over to this order. In addition, narrative prohibitions on erosion, floating materials, bottom deposits, temperature, and toxic substances are also being carried over from the previous order, and continue to be protective of the receiving waters.

The receiving water limitation for pH is revised to be consistent with the Basin Plan objective.

VI. 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 permits 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 contains provisions that supplement the federal standard provisions in Attachment D. 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 under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

B. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP) in Attachment E establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more information regarding these requirements, see Fact Sheet section VII.

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 effluent limitations 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. Facility Modification/Maintenance.

This provision requires Dischargers to inform the Regional Water Board of modifications to their facilities that will affect effluent quality. The provision also requires Dischargers to inform the Regional Water Board if an outfall is relocated or eliminated so that the Regional Water Board can make any necessary modification to its permit coverage. This provision is based on 40 CFR 2.41(I)(1).

3. Application for Authorization to Discharge

The provisions requiring submittal of an NOI form and compliance with this Order upon receipt of an Authorization to Discharge are based on 40 C.F.R. section 122.28(b). Likewise, the provision allowing the Executive Officer to terminate an Authorization to Discharge is also based on 40 C.F.R. section 122.28(b). The provision allowing the Executive Officer to require an individual permit is based on 40 C.F.R. section 122.28(b)(3).

4. Basis for Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities Review and Evaluation, and Status Reports. The purpose of this provision is to ensure adequate and reliable treatment and disposal of all wastewater and is based on 40 C.F.R. section 122.41(e).

b. Operations and Maintenance Manual Review and Status Reports. The purpose of this provision is to ensure that operations and maintenance procedures are in place, useful, and relevant to current equipment and operational practices. It is based on 40 C.F.R. section 122.41(e).

5. Basis for Best Management Practices, Special Studies, and Additional Monitoring Requirements

Best Management Practices Plans. This provision requires Dischargers to develop, update annually, and implement Best Management Practices (BMPs) plans. The purpose of the BMPs plan is to control and abate pollutant discharges to surface waters. The basis for this provision is 40 C.F.R. section 122.41 and as a means to provide equivalent protection to justify exception to the Basin Plan prohibition 1 on discharges without 10:1 initial dilution.

D. Intake Water Credit-Based Limitations

SIP section 1.4.4 provides that the Regional Water Board may consider pollutants in intake water on a pollutant-by-pollutant basis when establishing WQBELs if a discharger demonstrates certain conditions are met.

It is appropriate to allow for intake water credits for copper in this Order. SFPUC requested that the Regional Water Board consider allowance of intake water credits in this Order. Copper compounds and other chemicals are or have been used to control algae and other organisms that threaten drinking water quality in reservoirs. For example, copper sulfate was added to the San Andreas Reservoir from approximately 1954 to 1993 to control algae, bacteria, and crustacea to prevent taste and odor problems and to comply with drinking water standards. SFPUC reported that this legacy copper has been found in intake water to the Harry Tracy Water Treatment Plant at concentrations that significantly exceed applicable water quality objectives. This facility does not add copper but provides a net reduction in copper loading.

Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the intake water credit-based limits with the exception of condition (2) of SIP section 1.4.4. Condition (2) requires consistency with any applicable TMDL. This is unnecessary because TMDLs are not anticipated, or needed, to be established for the water bodies covered by this Order. Additionally, the requirement that intake credit limits must be pre-established in an authorization to discharge is for clarity with which limitations (Table 2 or Provision VI.D) a discharger must comply. A discharger also has the option of seeking applicability after its original NOI and withdrawing applicability all together, but both must be approved in an authorization or amended authorization to discharge from the Executive Officer.

Subsection 2 of this provision is based on SIP section 1.4.4 that intake water credit-based limits would allow a facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. The Order specifies compliance based on an annual average to account for sample and analytical variability in consideration of the minimum required monitoring frequency. The specified calculations are based on standard practice.

E. Dilution Credit-Based Limitations

SIP section 1.4.2 provide that the Regional Water Board may consider mixing zones, dilution credits, and ambient background concentration, of a priority pollutant in the receiving water body on a pollutant-by-pollutant basis and on a discharge-by-discharge or water body-by water body basis when establishing water quality based effluent limitations if a discharger demonstrates certain conditions are met.

SFPUC requested that the Regional Water Board consider allowance of dilution credits in this Order. As explained in section VI.D above, this facility does not add copper but provides a net reduction in copper loading.

Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the dilution credit based limits. There is no need for any adjustment due to TMDLs because TMDLs are not anticipated, or needed, to be established for the water bodies covered by this Order. Additionally, the dilution credit-based limits will be pre-established in the authorization to discharge so as to provide clarity with which limitations (Table 2 or Provision VI.E) a discharger must comply. Conservative assumption using the maximum observed background concentration will ensure that limitations are protective for all potential discharges. Moreover, the limitations, calculated as shown in Table F-4, are based on pre-selected dilution credits that encompass a reasonable range achievable and that the Regional Water Board has granted to other inland surface water dischargers.

A discharger also has the option of seeking applicability after its original NOI and withdrawing applicability all together, but both must be approved in an authorization or amended authorization to discharge from the Executive Officer.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The MRP is a standard requirement in all NPDES permits issued by the Regional Water Board, including this Order. It specifies sampling stations, pollutants to be monitored (including parameters for which effluent limitations are specified), monitoring frequencies, and additional reporting

requirements. The principal purposes of a monitoring program are to document compliance with WDRs and prohibitions established by the Regional Water Board; to facilitate self-policing by dischargers in the prevention and abatement of pollution arising from waste discharges; to develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and to prepare water and wastewater quality inventories.

A. Effluent and Intake Monitoring. Effluent monitoring is necessary to evaluate compliance with the Order's prohibitions and effluent limitations, and to inform the next permit reissuance. Additional monitoring for non-limited parameters are included for the first two years of this Order in order to verify the finding that those parameters pose no reasonable potential to cause exceedance of water quality objectives. The reasonable potential analysis for this Order was based on a truncated dataset because of facility upgrades in 2014 that improved discharge quality.

The intake monitoring is required only if intake water credit based limits apply, and is necessary to evaluate compliance with the intake water based limits.

This Order specifies an ML for chlorine residual of 0.1 mg/L which is consistent with the Statewide General Permit and other recently issued Regional Water Board permits. The previous order specified a 0.08 mg/L ML based on professional judgment at the time. In 2014, information came to light that justifies a 0.1 mg/L ML due to the capabilities of field instruments available. The Missouri Department of Natural Resources (2004, Permit Manual, Appendix T: Total Chlorine Residual Study), following applicable U.S. EPA guidance, generated data that showed that residual chlorine results ranging between the MDL of 0.04 mg/L and a calculated ML of 0.1 mg/L are not reliable due to analytical noise.

This Order specifies that for continuous chlorine monitoring, that only specific data will be used for the purpose of mandatory minimum penalty assessment. The methodology was developed with the State Water Board and an association of treatment plant operators (2004 BACWA Strategy for Reporting Continuous Chlorine for MMP Purposes). Following on this concept, a small allowance is made for MMP assessment of monthly average limits when additional monitoring cannot be conducted to obtain a representative monthly average of the discharge because of the intermittent nature of the discharge.

B. Receiving Water Monitoring. Receiving water monitoring is necessary to characterize the effects discharges could have on receiving waters and, in some cases, to evaluate compliance with receiving water limits. Freshwater monitoring is also necessary to calculate some water quality objectives.

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for discharges of treated filter backwash from drinking water filter facilities in the San Francisco Bay Region. As a step in the WDRs adoption process, the Regional Water Board developed tentative WDRs and encouraged public participation in the WDRs adoption process.

A. Notification of Interested Parties. The Regional Water Board notified prospective dischargers and interested agencies and persons of its intent to prescribe WDRs and provided an opportunity to submit written comments and recommendations. Notification was provided through *The*

Recorder in San Francisco. The public had access to the agenda and any changes in dates and locations through the Regional Water Board website at 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, which replaced an earlier draft that was noticed for public comment on September 8, 2015. 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 Farhad Azimzadeh.

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. on November 4, 2015.

- 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: March 9, 2016
Time: 9:00 a.m.
Location: Elihu Harris Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Farhad Azimzadeh, (510) 622-2310,
Farhad.Azimzadeh@waterboards.ca.gov

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharges, 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 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 www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml.

- E. Information and Copying.** 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 CAG382001, and provide a name, address, and phone number.
- G. Additional Information.** Requests for additional information or questions regarding this Order should be directed to Farhad Azimzadeh at (510) 622-2310 or Farhad.Azimzadeh@waterboards.ca.gov.

Appendix B Comments



San Francisco
Water Power Sewer

Operator of the Hetch Hetchy Regional Water System

525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
F 415.554.3161
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November 4, 2015

BY EMAIL

Mr. Farhad Azimzadeh, WRC Engineer
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Farhad.Azimzadeh@waterboards.ca.gov

RE: Comments - Tentative Order for General Water Discharge
Requirements for Discharges of Filter Backwash from Drinking Water
Filter Facilities NPDES Permit No. CAG382001

Dear Mr. Azimzadeh,

The City and County of San Francisco's Public Utilities Commission thanks you for the opportunity to comment on the Tentative Order for General Water Discharge Requirements for Discharges of Filter Backwash from Drinking Water Filter Facilities, NPDES No. CAG382001. We plan to enroll the discharge from the Harry Tracy Water Treatment Plant for coverage under this permit. We thank Regional Water Board staff for their collaborative efforts to develop this general permit.

We suggest several modifications to ensure that the facility is in compliance with all requirements when operated as designed and also to ensure that the release of water to the reservoir continues to protect the environment and public health. We have also proposed clarifications where needed to have a better understanding of the permit provisions.

We appreciate the time and effort that you and Lila Tang have devoted to preparing this tentative order and to responding to the questions and comments that we have brought to your attention in recent months. Should you have any comments or questions, please do not hesitate to contact Ellen Natesan at (415) 554-1556 or via email at enatesan@sfgwater.org.

Edwin M. Lee
Mayor

Francesca Viator
President

Anson Moran
Vice President

Ann Moller Caen
Commissioner

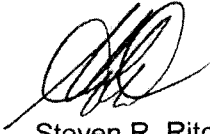
Vince Courtney
Commissioner

Ike Kwon
Commissioner

Harlan L. Kelly, Jr.
General Manager



Sincerely,



Steven R. Ritchie
Assistant General Manager, Water

cc: Bruce Wolfe, Regional Water Board
Lila Tang, Regional Water Board
David Briggs, SFPUC
Chris Nelson, SFPUC
Paul Gambon, SFPUC
Tim Ramirez, SFPUC
Ellen Natesan, SFPUC
John Roddy, CAO

Enclosure: Comments on the Tentative Order released October 5, 2015

**San Francisco Public Utilities Commission Comments Regarding Tentative Order
for the Renewal of NPDES Permit No. CAG382001
for Discharges of Filter Backwash from Drinking Water Facilities
November 4, 2014**

The San Francisco Public Utilities Commission (SFPUC) appreciates the opportunity to submit the following comments on the Tentative Order reissuing the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of filter backwash from drinking water facilities. The SFPUC intends to enroll under the permit for its discharge to San Andreas Reservoir from the Harry Tracy Water Treatment Plant (HTWTP).

In order to assist Regional Water Board staff in locating the sections of the Tentative Order being commented on, the page numbers are provided with the comment and prior to the requested permit language change. Due to variations in formatting, page numbers listed are approximate. The sequence of issues raised in this Comment Letter follows the organization of the Tentative Order and does not reflect an order of importance.

COMMENTS AND RECOMMENDATIONS

1. CLARIFICATION REGARDING DISCHARGE PROHIBITION III.C

In the Tentative Order, Discharge Prohibition III.C implements California Water Code section 13050. However, this appears to conflict with Finding II.C, which states that this permit is not intended to implement state law. The SFPUC requests clarification regarding the intent of Discharge Prohibition III.C in this permit. 4

2. PROPOSED MODIFICATIONS TO EFFLUENT LIMITATIONS

The Tentative Order includes effluent limits for parameters which appear to be unnecessary because they will not result in an identifiable benefit to the drinking water reservoirs or otherwise protect water quality. The SFPUC requests clarification and suggests specific changes to the effluent limitations. Additional comments and rationale for the each parameter are provided below, and a proposed markup is provided thereafter. 7

- **Total Suspended Solids (TSS).** The limitations of 30 mg/L (AMEL) and 45 mg/L (AWEL) were specified in the previous permit (Order No. R2-2009-0033). These are technology-based effluent limits originally developed for sewage treatment plants that provide secondary (biological) treatment to industrial and municipal wastewater. They are included in Table 4-2 of the Basin Plan, which states that the Water Board may also apply these TSS limitations selectively to certain other non-sewage discharges. The facilities applying for coverage under this permit

are *not* wastewater/sewage systems; they do not perform secondary wastewater treatment.

The regulatory basis for these numeric TSS and settleable matter limits is unclear; the Tentative Order Fact Sheet lacks the required demonstration to support the numeric TSS limits as well as the settleable matter limits, which need to consider best conventional pollutant control technology (BCT). The Tentative Order Fact Sheet (page F-10) describes BCT:

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

This BCT process described in the Fact Sheet implements the requirements in 40 C.F.R. 125.3; however, the two-part test does not seem to have been completed for either TSS or settleable matter. We understand that the two-part BCT test is needed in the Fact Sheet to justify the limits. The SFPUC requests clarification regarding the appropriateness of these limits for filter backwash discharges.

On the other hand, consistent compliance with these TSS limitations may require increased dosing with polymers. High doses of polymer may have contributed to acute toxicity during the final adjustments necessary for a treatment system upgrade at HTWTP. Removing the TSS limit will provide the operators with the flexibility to decrease polymer dosing, which in return may reduce toxicity. Hence, the SFPUC suggests the permit include a narrative limit in place of a numeric limit.

- **Settleable Matter.** As described in the previous section, the requirements in 40 C.F.R. 125.3 have not been applied to the establishment of the settleable matter limit. A regulatory basis for the settleable matter effluent limits, including the two-part BCT test, is needed in the Tentative Order Fact Sheet to justify appropriate limits.

In addition, another of SFPUC's major concerns involves the analytical method used to measure settleable matter (Standard Method 2540F). The method's

detection limit for settleable solids is equal to the proposed average monthly effluent limit (AMEL): 0.1 mL/L-hr. Having a detection limit equal to the most stringent limit will be very problematic. Hypothetically, if an agency observes an exceedance of the AMEL, staff will take additional samples to confirm whether there is a persistent issue. However, staff will not be able to mathematically average the sample results to a value less than AMEL because the detection limit is equal to the AMEL, resulting in noncompliance.

SFPUC would also like note that Basin Plan Table 4-2 footnote e notes that 1.0 mL/L-hr may be a more appropriate limit for the following:

e. Discharges from sedimentation and similar cases should generally not contain more than 1.0 ml/l-hr of settleable matter....

Because the HTWTP provides clarification (sedimentation) prior to its discharge of filter backwash, this 1.0 mL/L-h limitation may be more applicable for this permit.

Nonetheless, it is not clear why settleable matter limits are necessary; both the NPDES permits for Region 2 wastewater treatment facilities and the Santa Ana Region general permit that covers decanted filter backwash water (Order No. R8-2015-0004, NPDES No. CAG998001) do not have limits for settleable matter. The SFPUC requests these limits be removed.

- **Total Chlorine Residual.** Clarification in the main body of the permit is needed to indicate to staff that the intent of the 0.0 mg/L limit is to ensure that positive chlorine is not detected in the effluent. In practice, an exceedance of this limit should only occur if chlorine is *detected above the minimum level* associated with the laboratory analysis (i.e., not estimated at a value less than the minimum level). The SFPUC proposes a footnote that is consistent with the language in the Attachment E Table E-2 footnote 4 and Attachment F section VII.B. This updated footnote reflects a similar language in the current permit, statewide NPDES permit, and a recently-adopted individual NPDES permit for the Orinda Water Treatment Plant (Order No. R2-2015-0041). This footnote is necessary to prevent staff from overdosing with dechlorination chemicals to achieve a 0.0 mg/L result.
- **Copper (dilution factor).** If a copper limit must be included in the permit, the SFPUC suggest the inclusion of a dilution factor during the calculation of the limit. A requirement to comply with the end-of-pipe water quality criteria (i.e., before any mixing occurs with the receiving water) is unusual and very restrictive for water quality-based parameters. The SFPUC suggests the option to develop individual dilution factors; a dilution factor could be applied and the individual limits may be recalculated after issuance of the general permit during preparation

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of the NOI or during the permit term. We recognize that this type of option was also provided in EPA's offshore oil platform general permit (General Permit No. CAG280000). The dilution credit would be determined in conformance with the procedures in the State Implementation Policy Section 1.4.2 - Mixing Zones and Dilution Credits.

- **Acute Toxicity.** This limit is not included in the statewide permit and is not appropriate for this general permit. The SFPUC recognizes that HTWTP has experienced acute toxicity during startup of new facilities. This toxicity appears to have been caused by the polymers added to promote sedimentation efficacy. The relatively high dosage resulted from the need to comply with TSS limitations. If the tentative TSS limitations are removed as requested, the polymer dosage rates can be lowered to levels which will produce a consistently non-toxic discharge and the limitation will not be needed.

Suggested language revisions are shown below.

(Page 4)

Table 2. Filter Backwash Discharge Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum
Total Suspended Solids (TSS)	mg/L	---	45	30	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---
Total Chlorine Residual ^[1]	mg/L	---	---	---	0.0
Copper ^[2]	µg/L	8.6		4.3	
Whole Effluent Acute Toxicity	% Survival	[H]			

Abbreviations:

mg/L = milligrams per liter s

µg/L = microgram per liter

Footnotes for Table 2:

[1] Compliance with the acute toxicity limit shall be achieved in accordance with Section IV of the attached MRP (Attachment E). Representative samples of the effluent shall meet the following limits for acute toxicity:

- a. The survival of bioassay test organisms in 96-hour static renewal bioassays of undiluted effluent shall be:
 - i. a 3-sample median value of not less than 90 percent survival; and
 - ii. a single sample maximum of not less than 70 percent survival.
- b. These acute toxicity limits are further defined as follows:
 - i. 3-sample median limit: 3-sample median is defined as follows: if one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.
 - ii. Single sample maximum: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

The Discharger shall calibrate and maintain total residual chlorine field test kits and analyzers (U.S. EPA-approved Standard Methods 4500-Cl F and G) to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) for total residual chlorine; this ML shall also be the reporting limit (RL). Therefore, the Discharger will be considered out of compliance with the total chlorine residual limit if the effluent concentration is greater than 0.1 mg/L.

^[2] If the Discharger demonstrates that it qualifies for intake water credits, then the Discharger shall comply with the Intake Water Based Limitations for copper in Provision VI.D rather than the water quality based limitations in Table 2. The Executive Officer will determine if the Discharger qualifies in the authorization to discharge or an amended authorization, based on the Discharger's documentation in its NOI, or a supplemental to the NOI, that it meets all the conditions in Provision VI.D.1.

3. CLARIFICATION REGARDING INTAKE WATER CREDIT PROVISION

The Fact Sheet of the Tentative Order indicates that Provision VI.D.1 is based on the State Implementation Policy (SIP) section 1.4.4. The SFPUC greatly appreciates the substantial time and thought that Regional Water Board staff dedicated towards incorporating information about the intake water credit option. However, the SFPUC finds the provision language slightly confusing; it appears to differ from the text in the SIP in a manner that may potentially preclude granting the intake water credit for a discharge to a reservoir.

The SFPUC intends to apply for intake water credit based limitations, but it is unclear how to satisfy the four subcriteria (section VI.D.1.b.i – iv.) for a discharge into a reservoir. We request clarification about what type of documentation is needed to satisfy this provision for agencies that withdraw and discharge to the same reservoir.

In addition, the SIP allows the Regional Water Board to consider other factors to determine whether the intake water is from the same water body as the receiving water body. The SFPUC suggests the inclusion of this language to provide flexibility to the Regional Water Board. Proposed markups are provided below:

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(Page 8-9)

D. Intake Water Credit Based Limitations

1. Conditions to Qualify

- a. ...
- b. The intake water shall be from the same water body as the receiving water body. To qualify for intake water credit based limitations, the Discharger shall demonstrate that it meets this condition in an attachment to its NOI by showing all of the following:
 - i. The ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water.
 - ii. There is a direct hydrological connection between the intake and discharge points.
 - iii. The water quality characteristics are similar in the intake and receiving water.

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

The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body. In the case of reservoirs, lakes, or other large waterbodies, the Discharger may provide facility diagrams or other documentation to demonstrate that the intake water is from the same water body as the receiving water body.

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4. PROPOSED MODIFICATION OF PROVISIONS FOR NEW STATUS REPORTS

The intent of the three documents required in the provisions section of the Tentative Order is not clear:

- Provision VI.3.a. Wastewater Facilities Review and Evaluation, and Status Reports (Wastewater Report);
- Provision VI.3.b. Operations and Maintenance (O&M) Manual Review and Status Reports; and
- Provision VI.4. Best Management Practices (BMPs) Plan.

Attachment C lists items required in the site-specific BMPs Plan; however, this list of items overlaps with the requested information for the wastewater report and O&M Manual. Repeated items listed for all three reports include the description of processes, maintenance procedures and schedules, and identification of responsibilities. The current permit requires that this information be included in one single document: the BMPs Plan. Implementation of the BMPs Plan will ensure that facilities are properly operated and maintained as required by 40 CFR 122.41. As such, the SFPUC considers that the BMPs Plan may be interpreted an inclusive document.

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Accordingly, the SFPUC suggests all requested items be included in the BMPs Plan to simplify the requirement, prevent any confusion, and avoid developing repetitive reports containing the same information. Consolidation into a single document would lead to a better understanding of operational procedures by both the operators and Regional Board staff.

5. PROPOSED MODIFICATION TO ACCELERATED MONITORING FREQUENCY

The SFPUC understands that immediate accelerated monitoring is required when an effluent limitation exceedance occurs. However, it is unclear how daily accelerated monitoring would provide valuable information to the Regional Water Board to protect beneficial uses and preserve water quality. Instead, the SFPUC requests this frequency be changed to weekly when practicable.

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Moreover, performing daily monitoring until two consecutive daily samples comply with the limitations is logistically difficult and impractical. Typically, there is a time lag between when a sample is collected and when laboratory results are finalized. Data for many constituents are often not available for 2-3 weeks for some parameters depending on testing lead times. Scheduling the sampling and testing (which include mobilizing staff, equipment, and supplies) would be a burden for plant and laboratory staff, taking them away from their routine responsibilities to ensure proper plant operation.

Hence, the SFPUC requests the following language changes:

(Page E-2)

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

...

C. When a sampling result is above an effluent limitation or outside of the effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to ~~daily~~ weekly as soon as practicable until at least two consecutive ~~daily~~ samples demonstrate compliance with the limitation.

6. PROPOSED MODIFICATION FOR GRAB SAMPLING

At HTWTP, the two streams that combine to comprise the discharge occur automatically, not manually. One stream consists of filter backwash and the second consists of filter-to-waste water (discussed below in Comment No. 12). The HTWTP's control system initiates the filter backwashing process for one filter when an online analyzer detects that the water downstream of that filter has exceeded SFPUC's internal turbidity goal. Then the filter is put into service, and filter-to-waste water is generated. There are multiple filters at the plant, and the frequency of filter backwashing is variable. One filter may need backwashing after 30 hours and another may need backwashing after 36 hours. Because these processes occur automatically for multiple filters, discharge flows often fluctuate in an unpredictable manner during the day. It is possible for multiple filter backwashing processes to occur in parallel at the same time, and it is also possible for 4-6 hours to pass without any filter backwashing.

Hence, collecting samples during periods of daytime maximum flow may not be feasible at times because the "daytime maximum flow" is not predictable. The SFPUC requests the removal of the daytime maximum flow language for grab sampling, as shown below.

(Page E-2)

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

...

D. Grab samples shall be collected on random days ~~during periods of daytime maximum flow (if flow varies significantly during the day).~~

7. PROPOSED MODIFICATIONS TO EFFLUENT MONITORING

The effluent monitoring in Table E-2 in the Tentative Order is excessive compared with the statewide permit and includes many pollutants of no possible environmental consequence. Removing many of these parameters would bring better consistency with the statewide permit, which has annual representative monitoring for only volume, chlorine, and turbidity. (The statewide event monitoring also has pH for superchlorinated discharges.) The SFPUC requests specific changes to the effluent monitoring; additional rationale for the parameters are provided below, and a proposed markup is presented thereafter.

- **Chlorine.** The SFPUC requests for the language changes to clarify the required monitoring and reporting of continuous monitoring data for total chlorine residual. The language was mostly copied from recently adopted NPDES permits for discharges of treated wastewater effluent in the Bay Area, such as those for the East Bay Municipal Utilities District (EBMUD) Main Wastewater Treatment Plant (Order No. R2-2015-0018) and the Las Gallinas Valley Sanitary District Sewage Treatment Plant (Order No. R2-2015-0021). The language should clearly indicate how staff need to report data from continuous analyzers. The sampling frequency in the footnote was updated to reflect the frequency in the monitoring table as shown below.
- **Metals and trihalomethanes.** The rationale for the semiannual monitoring of metals and trihalomethanes requirement is not clear. The Fact Sheet states that this monitoring is necessary to verify reasonable potential. However, other than copper, reasonable potential was not triggered and is not expected for any of the other metals and trihalomethanes. If Regional Water Board staff insist on keeping this monitoring, the SFPUC suggests (1) the addition of a footnote to allow monitoring for total chromium instead of hexavalent chromium and (2) the re-addition of a footnote stating that monitoring is only required for the first two years of the permit. The latter footnote was removed from the previous public Tentative Order and Fact Sheet language on pages F-22 – F-23 is consistent with this footnote.
- **Standard Observations.** Please see Comment #9 regarding monitoring for standard observations.
- **Priority Pollutants.** Priority pollutant monitoring is not required in the current permit. Furthermore, a clear justification has not been made as to why it is necessary in the next permit. The SFPUC would like to cite State

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Implementation (SIP) for Priority Pollutants Section 1.3,

"The RWQCB shall require periodic monitoring (at least once prior to the issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established; however, the RWQCB may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from this monitoring requirement."

The SFPUC requests the Regional Water Board staff exercise their discretion in exempting filter backwash discharges from priority pollutants. If the Regional Water Board still deems it necessary to maintain priority pollutant monitoring, the SFPUC requests the requirement be consistent with the requirements in the NPDES permit for the Orinda Water Treatment Plant (Table E-2 footnote 6): priority pollutant monitoring is not required for pollutants sampled within the previous order term and not otherwise listed in Table E-2.

(Page E-3 – E-4)

Table E-2. Treated Filter Backwash Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate and Volume ^[1]	MGD/MG	Continuous or daily	1/Day
Total Suspended Solids (TSS) ^[2]	mg/L	Grab	2/Year
Settleable Matter ^[2]	mL/L-hr	Grab	2/Year
Turbidity ^[4]	NTU	Grab	2/Year
pH	standard units	Grab	2/Year
Total Chlorine Residual ^[3]	mg/L	Grab	1/4 Hours
Copper, Total Recoverable ^[4]	µg/L	Grab	1/Quarter
Zinc, Total Recoverable ^[4]	µg/L	Grab	2/Year
Mercury, Total Recoverable ^[4, 5]	µg/L	Grab	2/Year
Selenium, Total Recoverable ^[4]	µg/L	Grab	2/Year
Arsenic, Cadmium, Chromium (VI), Lead, Nickel, Silver ^[4]	µg/L	Grab	2/Year
Chloroform	µg/L	Grab	2/Year
Dichlorobromomethane	µg/L	Grab	2/Year
Chlorodibromomethane	µg/L	Grab	2/Year
Bromoform	µg/L	Grab	2/Year
Acute Toxicity ^[6]	% survival	Grab	2/Year
Standard Observations ^[7]	—	—	1/day

Other Pollutants (see Fact Sheet Table F-6 and other pollutants identified in NOI application) ⁽³⁾	µg/L or other units as applicable	Grab	Once
---	-----------------------------------	------	------

Footnotes:

...
 (3) The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) and reporting limit (RL) for total residual chlorine. If the Discharger monitors chlorine residual continuously, the Discharger shall report from discrete readings of the continuous monitoring every 4 hours on the hour, the maximum 4-hour reading for each day and any of the other discrete 4-hour readings that exceed the effluent limit, then ~~the~~ The Discharger shall describe any and all excursions of the chlorine limit based on the 4-hour readings in the transmittal letter of self-monitoring reports and corrective measures applied to address excursions. However, for the purpose of mandatory minimum penalties required by Water Code section 13385(i) and other enforcement actions, compliance shall be based only on these 4-hour discrete readings from the continuous data every hour on the hour. The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that residual dechlorinating agent is present. This monitoring system may be used to prove that anomalous residual chlorine exceedances measured by on-line chlorine analyzers are false positives because it is chemically improbable to have chlorine present in the presence of sodium bisulfite. If Regional Water Board staff finds convincing evidence that chlorine residual exceedances are false positives, the exceedances are not violations of this Order's total chlorine residual limit.

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...
 (7) Standard observations include the following:

- a. ~~Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter); presence or absence~~
- b. ~~Odor; presence or absence, characterization, source, distance of travel, and wind direction.~~

8. REQUEST FOR REMOVAL OF RECEIVING WATER MONITORING

The SFPUC requests that receiving water monitoring requirements in the Tentative Order be reconsidered. It is unclear exactly why the monitoring is necessary, and the statewide permit does not require complex monitoring of this degree. The NPDES permit for the Orinda Water Treatment Plant does not require monitoring for many of these constituents; it requires only monitoring for priority pollutants that weren't monitored during the previous order term.

In addition, the facilities that plan to apply for coverage under this permit already perform a variation of this type of monitoring. The water treatment facilities discharge into the reservoirs that provide source water (intake) into their respective water treatment plants. Hence, the intake water is from the same water body as the receiving water body. As required by the California Code of Regulations Title 22, drinking water facilities already perform extensive monitoring of the source water for many conventional pollutants and at least over 60 priority pollutants (including metals and many volatile organic compounds). The SFPUC provides these data to the State Water Board's Division of Drinking Water.

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Thus, it is unclear how much additional information receiving water monitoring will provide to protect beneficial uses because much of the monitoring is performed through another regulatory vehicle. We would like to prevent staff from performing the same

monitoring twice. Therefore, the SFPUC proposes removing all receiving water monitoring in this permit.

9. REQUEST FOR REMOVAL OF STANDARD OBSERVATIONS MONITORING

The Tentative Order contains new daily monitoring requirements for standard observations in the discharge and receiving water. These monitoring requirements appear both onerous and excessive. Performing daily observations and record-keeping for both the discharge and receiving water would be a major burden on staff workload and take away valuable staff time currently dedicated towards the proper operation of the drinking water facilities.

If an unusual incident were to occur, staff would quickly perform effluent and receiving water observations to check if the discharge was causing adverse impacts on water quality. Moreover, the SFPUC would like to note that standard observations are not required in neither the NPDES permits for treatment plants in the Bay Area that discharge wastewater at significantly larger flow rates (e.g., NPDES permits for the SFPUC's Southeast Water Pollution Control Plant and EBMUD'S Special District No. 1 Main Wastewater Treatment Plant) nor for the Orinda Water Treatment Plant (Order No. R2-2015-0041).

We request for the removal of the monitoring requirements for standard observations. Additional proposed markups associated with this comment for filter backwash monitoring are provided in Comment #7

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(Page E-5 – E-6)

Table E-3. Receiving Water Monitoring

Parameter	Units	Sample Type ^[1]	Minimum Sampling Frequency ^[2]
:			
Standard Observations ^[6]	—	—	1/Day

Footnotes:

[1] Standard observations include the following:

- a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter); presence or absence, source, and size of affected area.
- b. Discoloration and turbidity; description of color, source, and size of affected area.
- c. Odor; presence or absence, characterization, source, distance of travel, and wind direction.
- d. Beneficial water use; presence of water-associated waterfowl or wildlife, fisher people, and other recreational activities in the vicinity of each sampling station.
- e. Hydrographic condition; time and height of high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).
- f. Weather conditions; air temperature, total precipitation during previous five days, and, if there is a meteorological station onsite, total precipitation on day of observation.

10. REQUEST FOR REMOVAL OF GRAPHICAL DATA SUMMARIES REQUIREMENT

Attachment E section VI. B.2.g. of the Tentative Order specifies that both tabular and graphical summaries of monitoring data are required for inclusion in the annual self-monitoring reports (SMRs). However, Attachment E section VI. B.2.b already requires reporting the data in a tabular format and neither the current permit nor the statewide permit requires graphical summaries of all monitoring data. Preparing graphical summaries of all the data every year would be extremely labor intensive with little benefit. As the Tentative Order is written now, a discharger would need to prepare a graph for every single constituent – that is over 130 graphs needed to accompany the annual SMR. Most of these graphs may consist of only one or two data points. Thus, the SFPUC requests removal of the requirement in Attachment E section VI. B.2.g. 25

If the Regional Water Board insists that graphical summaries are needed, the language should be edited for clarity (and to prevent the preparation of graphs that are not useful) by stating that graphs are only necessary for those parameters monitored at a monthly frequency or greater. This language is consistent with NPDES permit for wastewater treatment plants in the Region. Proposed language is provided below.

(Page E-8)

- g. Both tabular and graphical summaries of monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater. ~~(the Discharger shall identify trends, if any, in pollutant concentrations found in effluent or receiving water samples for the previous year or years.)~~

11. CONSISTENCY FOR THE SEMIANNUAL MONITORING FREQUENCY

The SFPUC requests adjusting the 2/Year monitoring period to be consistent with the monitoring periods associated with the data submitted in the annual SMR (calendar year) and quarterly frequency (three-month periods starting January 1). Proposed language is provided below. 27

(Page E-8)

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
:		

2/Year	Closest <u>May</u> <u>January</u> 1 or <u>November</u> <u>July</u> 1 before or after effective date Authorization to Discharge ^[1]	<u>November 1 through April 30 and</u> <u>May 1 through October 31</u> <u>January 1 through June 30</u> <u>July 1 through December 31</u>
:		

12. INCLUSION OF FILTER-TO-WASTE STREAM

Discharge from HTWTP to San Andreas Reservoir is currently covered under the current general NPDES permit. As allowed by the permit, *both* filter backwash and filter-to-waste (rewash) water are discharged to San Andreas Reservoir since HTWTP's continuous filter backwash occasionally includes filter-to-waste water.

Coverage for a filter-to-waste stream is not mentioned in the Tentative Order. In order to accurately describe the discharge, the SFPUC suggests the inclusion of language in the permit to allow coverage for the filter-to-waste stream. Proposed language below is copied from the current permit (page F-5 – F-6).

(Page F-3)

B. General Description of Coverage

1. This Order covers the discharge from settling basins or clarifiers of both treated dechlorinated filter backwash and filter-to-waste (rewash) water to inland surface waters. At least two dischargers are anticipated to seek coverage under this Order. The dischargers include (1) San Francisco Public Utilities Commission (SFPUC), Harry Tracy Water Treatment Plant and associated San Andreas Reservoir; and (2) the City of Napa (Napa), EIP Jameson Canyon Water Treatment Plant and associated Lake Hennessey.

Filter-to-waste (rewash) water is generated by filters immediately after being placed back into service following backwashing. This water is generally of very high quality and amounts to approximately 0.5 percent of the total amount of water filtered. Filter backwash and filter-to-waste streams will typically account for most of the volume of wastewater discharged from water treatment plants. Using estimates of 2 – 10 percent of plant production for filter backwash and 0.5 percent of plant production for filter-to-waste or rewash water, wastewater discharges from water treatment plants can amount to approximately 25,000 – 105,000 gallons per million gallons of production.

Throughout this Order, the term “treated filter backwash” includes both treated dechlorinated filter backwash and filter-to-waste (rewash) water.

13. TYPOGRAPHICAL ERRORS

The following comments pertain to typographical errors and inconsistencies contained in the Tentative Order and indicate requested corrections.

(Revision to page 3)

A. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through ~~G~~ F are also incorporated into this Order. 42

(Revision to page F-8)

In ~~October 2011~~ July 2015, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources.

(Revision to page F-22)

D. Intake Water Credit Based Limitations

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...

Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the intake water credit based limits with the exception of condition ~~(1)~~ (2) of SIP section 1.4.4. Condition ~~(1)~~ (2) requires consistency with any applicable TMDL.

....



**Public Works Department
Water Division**

November 4, 2015

Farhad Azimzadeh
San Francisco Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comment Letter - General Waste Discharge Requirements for Discharges of Filter Backwash from Drinking Water Filter Facilities

Dear Mr. Azimzadeh,

Please find enclosed comments from the City of Napa respectfully submitted for your consideration on the San Francisco Bay Regional Water Quality Control Board's (SFRWQCB) Tentative Order for General Waste Discharge Requirements, NPDES No. CAG382001, for Discharges of treated filter backwash from filter facilities to inland surface waters in the San Francisco Bay Region (TO).

Based on the significant operational differences between the City of Napa and the San Francisco Public Utilities Commission (SFPUC) drinking water treatment plants, the City of Napa requests the opportunity for individual permits, specific to each drinking water facility. Each agency differs in areas such as: receiving (source) water quality, the drinking water treatment process, product of filter backwash (discharge) water and quantity of discharge. It is unacceptable to apply requirements to Napa's system when we have provided years of data as sampled under Title 22 Drinking Water Requirements showing the constituents are not present and not of concern in the raw surface water or the treated water. This is a matter of maintaining the mission of public protection of water resources and reasonable use of available public resources.

1. *Filter Backwash Regulatory Consistency.* There are various NPDES permits throughout the State regulating filter backwash discharges or discharges of similar nature. The City of Napa echoing the statements of the San Francisco Bay Regional Water Agency Partners (Agencies) ask the SFRWQCB to review other NPDES permits especially the Statewide NPDES Permit for

Drinking Water Discharges and utilize similar language and requirements for consistent regulation of these low threat discharges.

2. *Unnecessary Effluent Limitations.* The Tentative Order includes effluent limits for parameters which are unnecessary because they will not result in an identifiable benefit to the reservoirs or otherwise protect water quality. In addition, these parameters are not regulated in the Statewide General NPDES Permit for Discharges from Drinking Water Systems (Order WQ 2014-0194-DWQ). The Agencies request removal of the effluent limitations for TSS, Settleable Matter and Acute Toxicity. 7

3. *Excessive Monitoring.* The City of Napa in concert with the Agencies believe the monitoring requirements set forth in the SFRWQCB T.O. are excessive and include monitoring of pollutants of no possible environmental consequence. Furthermore, the agencies ask SFRWQCB staff to consider cost of compliance for the excessive monitoring requirements. The Agencies would like to cite State Implementation (SIP) for Priority Pollutants (PP) Section 1.3, "*The RWQCB shall require periodic monitoring (at least once prior to the issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established; however, the RWQCB may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from this monitoring requirement.*" The Agencies request the SFRWQCB exercise their discretion in exempting filter backwash discharges from priority pollutants and also remove monitoring requirements for metals and trihalomethanes. 19

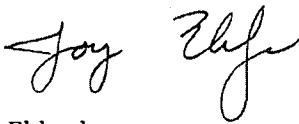
4. *Standard Observations Monitoring.* The SFRWQCB T.O. requires daily monitoring for standard observations in the discharge and receiving water. These monitoring requirements are onerous and excessive. Performing daily observations and record-keeping for both the discharge and receiving water would be a major burden on staff workload and take away valuable staff time currently dedicated towards strict attention to proper operations of the critical facilities that provide clean, safe drinking water to the public. The Agencies request the Standard Observation monitoring requirements be removed. In the City of Napa's case this location is one-half mile away from the treatment plant control system console. 19
and
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The City of Napa holds a permit to operate all facilities associated with the potable water treatment plant issued by the State Water Resources Control Board Division of Drinking Water, however the SFRWQCB continues to view the operation as wastewater, as indicated in the terminology throughout the document. Potable drinking water starts from natural background raw surface water and is cleaned through processes to create drinking water, essentially removing the natural sediment that would settle out naturally and remain in the Lake Hennessey reservoir. This is very different from wastewater yet this fact continues to go unrecognized despite repeated comments. Furthermore, the TO uses faulty methods to establish parameters for two basins that are not in geological proximity or hydraulically connected. Using the geometric mean of the hardness data provided by the two discrete water sources as proposed is postposterous. 11
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The City of Napa has maintained the current NPDES permit and has demonstrated its protectiveness of source water quality, in conjunction with complying with the SDWA and drinking water facility requirements mandated by the SWRCB.

The City of Napa appreciates the opportunity to provide comments to the SFRWQCB Tentative Order for General Waste Discharge Requirements for Discharges of Filter Backwash from Drinking Water Facilities. If you have any comments or questions regarding the content of this letter, please feel free to contact me at (707) 257-9521, extension 7136 or via email at: jeldredge@cityofnapa.org.

Respectfully submitted,



Joy Eldredge
Water General Manager

Enclosure (Comments on 7 pages)

Cc (via email): Erin Kebbas, Water Quality Manager
Robert Janowski, Water Treatment Manager

CITY OF NAPA
TO COMMENTS FOR GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF FILTER BACKWASH FROM DRINKING WATER
FILTER FACILITIES

Page 3: I. Scope of General Permit

- In the first paragraph, need to include discharges of filter-to-waste and sedimentation desludge decant water so reference to filter backwash includes all three current NPDES discharges.

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Page 6: 2. Application for General Permit Coverage and Authorization to Discharge; b. Facility Modifications

- Keep original NPDES permit language for 30 day notification instead of 90 day notification.
- Rationale: drinking water treatment modifications may need to take place based on public health and sooner than 90 day notice.

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Page 7: 3. Construction, Operation and Maintenance Specifications

- Remove entire reference
- Rationale: drinking water treatment plants are already required to review, evaluate and maintain all reports and documentation under SDWA and SWRCB permit to operate.
- If the State Board NPDES permitting staff is interested in this information, contact their counterparts in the Division of Drinking Water instead of duplicating the requirement.
- All aspects of the facilities are operated and maintained to ensure adequate treatment of water and removal of naturally occurring impurities in the raw surface water in order to protect public health.
- Remove wastewater reference and contact the Division of Drinking Water to learn greater understanding on the difference between drinking water and wastewater processes. This is not processed sewage water, it is processed natural raw surface water.

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Page 8: 4. Best Management Practices, Special Studies, and Additional Monitoring Requirements; a. Best Management Practices (BMPs) Plan;

- Remove "i. The Discharger shall develop and keep on site a BMPs plan as it relates to its filter backwash facilities including the management of the solids removal from filter backwash and make it available to the Executive Officer upon request"
- Rationale: See comment 2 under Page 7 item 3. Construction, Operation and Maintenance Specifications. The information is already required and included in drinking water treatment plant Operation Plan and SDWA and SWRCB permit to operate.

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Page A-3: Mixing Zone

- Remove reference to wastewater discharge reference and replace with "filter backwash, filter-to-waste and/or sedimentation desludge decant"
- The City of Napa filter backwash, filter-to-waste and/or sedimentation desludge decant discharge location is not a stream or limited volume waterbody (as implied by this definition of Mixing Zone.) The waterbody is between 10,000 and 31,000 acre-feet of a flow-through reservoir not an ephemeral stream with periods of reduced flow volumes as implied.

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**CITY OF NAPA
TO COMMENTS FOR GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF FILTER BACKWASH FROM DRINKING WATER
FILTER FACILITIES**

Page B-2: IV. Discharge and Receiving Water Quality; A. Effluent Discharge Data

- Remove "other pollutants"
- Rationale: parameters already included in SDWA and SWRC Title 22 annual (or more frequent) mandated testing

13

Page B-3: IV. Discharge and Receiving Water Quality; B. Receiving Water Data

- Remove "other pollutants"
- Rationale: parameters already included in SDWA and SWRC Title 22 annual (or more frequent) mandated testing

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Page C-2: VII. Site-Specific Best Management Practices (BMPs) Plan; A. Site-specific BMPs Plan for Discharges from Drinking Water Facilities; 1. Facility Operation

- Remove c."...and include a section estimating the residual concentration in the discharge as compared to the no adverse effect level concentration as documented in the ecological section of the applicable Material safety Data Sheet (MSDS) for every chemicals used. A copy of the MSDS for every chemicals used is required to be in the BMP"
- Rationale: all chemicals used for drinking water treatment facilities are pre-approved and mandated by the SDWA, SWRCB and the City of Napa, Department of Environmental Management's Hazard Materials Management Plan (HMMP). MSDS are physically posted in multiple locations throughout treatment facility and in SWRCB and HMMP-mandated reports. MSDS request is redundant and unnecessary.

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Page C-4: Application Fee and Mailing Instructions

- Request reduction in fee
- Rationale: drinking water facility is already paying fees for partial coverage through statewide general NPDES permit and the new TO posts fee increase over 100% for the same permit with less staff review time required by RWQCB

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Page D-9: B. Publicly-Owned Treatment Works (POTWs)

- Request section removed
- Rationale: Not applicable. POTWs do not have pollutant introduction from indirect dischargers. This would interfere with the process of creating clean, safe, potable drinking water from the raw water source.

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Page E-2: III. Effluent Sampling, Analyses and Observations

- Request provision of C.
- Rationale: if discharger stops discharge and samples cannot be collected, sample frequency in C. cannot be accommodated

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Page E-2: III. Effluent Sampling, Analyses and Observations

- Request modification of D.
- Rationale: As many drinking water laboratories are unable to complete all required tests in-house, sampling must be coordinated with outside laboratories. Therefore, collection must be coordinated with multiple parties to be completed. Request language

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CITY OF NAPA
TO COMMENTS FOR GENERAL WASTE DISCHARGE REQUIREMENTS
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modification of the following: "grab samples shall be coordinated with drinking water facility in accordance with the monitoring period established in Table E-4."

Page E-3: Table E-2. Treated Filter Backwash Monitoring

- Remove "Settleable Matter" 19
- Rationale: drinking water treatment facilities already mandated by SDWA and SWRCB for water quality
- Remove "Standard Observations" 19
- Rationale: information already reported in NPDES for aquatic pesticide application. Information was not previously included in original NPDES permit. Drinking water treatment facilities already mentally observe treatment process as required by SDWA and SWRCB. Redundant information.
- Modify "total chlorine residual" minimum sampling frequency from "¼ hours to 1/day or 1/discharge" 19
- Rationale: as drinking water treatment operation is variable, minimum sampling frequency reduction should coincide with daily discharge. Hourly water quality data for last five years proves variability of discharge and effluent limit below maximum.
- Remove "Other Pollutants" 13
- Rationale: parameters already included in SDWA and SWRC Title 22 annual (or more frequent) mandated testing

Page E-4: Remove reference to "continuous" 27

- Rationale: continuous description no longer used in permit

Page E-4: Modify Grab Sample Definition

- Rationale: As many drinking water laboratories are unable to complete all required tests in-house, sampling must be coordinated with outside laboratories. Therefore, collection must be coordinated with multiple parties to be completed. Request language modification of the following: "grab samples shall be coordinated with drinking water facility in accordance with the monitoring period established in Table E-4." 28

Page E-4: Footnote (1)

- Remove redundant flow meter language, "Some discharge points are not equipped with flow meters; flows can be estimated in this case." 29

Page E-4: Footnote (5)

- All parameters should be tested in accordance with SDWA and SWRCB-mandated detection limit requirements. 24

Page E-4: Inclusion of original NPDES Footnote (4) language indicating discontinuing parameter sampling

- Rationale: if previous 5 year permit indicates monitoring results below the lowest applicable water quality objective for the exact same water discharge than the discharger should be granted discontinuance of parameter sampling. 19

CITY OF NAPA
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Page E-5: IV. Whole Effluent Acute Toxicity Testing

- Remove F. The Discharge shall investigate the cause of any mortalities and report its findings in the next self-monitoring report." 30
- Rationale: many drinking water facilities cannot analyze acute toxicity in house and therefore use outside laboratories for analyses. Requirement previously not included in original NPDES permit.

Pages E-5 and E-6: Receiving Water Monitoring

- Remove "other pollutants" 33
- Rationale: parameters already included in SDWA and SWRC Title 22 annual (or more frequent) mandated testing
- Remove "Standard Observations" 25
- Rationale: information already reported in NPDES for aquatic pesticide application. Information was not previously included in original NPDES permit. Drinking water treatment facilities already observe treatment process as required by SDWA and SWRCB. Redundant information. 24
- Modify Footnote (1)
- Rationale: method approval, including detection limits, for drinking water treatment facilities is already mandated by the SDWA and SWRCB
- Modify Footnote (2) 31
- Rationale: drinking water treatment facilities already have previously dedicated sample locations from original NPDES permit as approved by the SWRCB. Remove "samples shall be collected within one foot below the surface of the receiving water body, unless otherwise stipulated..." and replace with "samples shall be collected from a location not impacted by the discharge."
- Modify Footnote (3) 19
- Rationale: Agencies requesting permit coverage have over 5 years of data representing receiving water monitoring. Therefore, agencies should be granted ability to present previous water quality information for sampling waiver.

Page E-6: Remove B. "Receiving water samples shall be collected on days coincident with effluent sampling. Samples shall be collected within one foot of the surface."

- Rationale: drinking water treatment facilities are already mandated for water quality parameter testing by the SDWA and SWRCB. Therefore, sampling flexibility needs to be available for agencies to collect according to SDWA and SWRCB. In addition, drinking water treatment facilities already have previously dedicated sample locations from original NPDES permit as approved by the SWRCB. Replace B with "Receiving water samples shall be collected on days coincident with effluent sampling, unless previously arranged by the agency according to the SDWA and SWRCB. Samples shall be collected from a location not impacted by the discharge." 32

Page E-8: 2. Due Dates and Contents

- Remove "g" reference to graphical summary of data 26

CITY OF NAPA
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FOR DISCHARGES OF FILTER BACKWASH FROM DRINKING WATER
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- Rationale: graphical summary of data not required in original NPDES permit and required redundant data information puts unnecessary burden on limited staff.
- Remove "the discharger shall identify trends, if any, in pollutant concentrations found in effluent or receiving water samples for the previous year or years." 26
- Rationale: SMR content is record of previous year's data, not historical trending. Agencies submit data annually to RWQCB for their review.

Page E-9: Table E-5. Minimum Levels

- As previous and current TO, NPDES permit is treated water discharge, all minimum levels should mirror the SDWA Title 22 DLRs for consistency with the SWRCB. 24

Page E-12: Footnote (4)

- Remove reference to both methods of testing
- Rationale: Maintain consistency with the SWRCB and SDWA Title 22 requirement. Any method should be applicable as long as it meets SWRCB Title 22 DLR. 24

Page E-12: 5. Compliance Determination

- Maintain consistency with the SWRCB and SDWA Title 22 requirements and associated DLRs and MCLs. 24

Page F-2: I. Permit Information

- TO needs to reflect previous NPDES permit inclusion of treated filter backwash water, filter-to-waste and sedimentation desludge decant water. Use previous NPDES permit reference, "it regulates discharges from drinking water facilities to inland surface waters of treated filter backwash, filter-to-waste and sedimentation desludge decant discharge." 3

Page F-2: II. Facility Description

- Update 1. Description, c: to read, "the filter is refilled with water from the process train and put back on line." 3
- Rationale: incorrect statement as filters are not filled with source water.

Page F-3: B. General Description of Coverage

- Update TO to reflect addition of filter-to-waste and sedimentation desludge decant water. 3
- Remove "EIP Jamieson Canyon" and update to read, "Hennessey Water Treatment Plant and associated Lake Hennessey." 35
- Update 2. to reflect previous NPDES permit inclusion of treated filter backwash water, filter-to-waste and sedimentation desludge decant water. 3

Page F-5: Clarification

- If potential copper violation is currently being investigated, why is it included in the TO? Why not wait until investigation is completed before requiring unnecessary effluent testing? 36
- The goal is to resolve the problem and the solution is imminent.

CITY OF NAPA
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Page F-6: 4. Safe Clean Water

- Reference is made to human health and SDWA and therefore all DLRs and reasonable pollutant MCLs need to maintain consistency with those already established by the SDWA Title 22 and regulated per the SWRCB for drinking water treatment plants. 6

Page F-7: 6. Anti-Backsliding Requirements

- Use exception of effluent limitations to mirror those already established by the SDWA Title 22 and regulated by SWRCB. 6
- Furthermore as science advances, this requirement needs to allow for revised conclusions based on sound science.

Page F-9: Top of page – first sentence

- Update to reflect previous NPDES permit inclusion of treated filter backwash water, filter-to-waste and sedimentation desludge decant water. 3

Page F-9: 2. Exception to Shallow Water Discharge Prohibition (Second paragraph)

- Remove provisions VI.C.3. and VI.C.4.a as they are already required as per the SDWA for drinking water treatment plants. Redundant reporting constitutes an inordinate burden for dischargers and waste of public funds. 37

Page F-10: 2. Applicable Limitations, a. Filter Backwash Discharges, ii. Settleable Matter

- Remove effluent limitation due to quality of discharge water and SDWA provisions for source water. Treatment effectiveness is determined by the filtration backwash process and not needed via settleable matter. 7

Page F-11: 2. Applicable Limitations, a. Filter Backwash Discharges, iii. Chlorine Residual

- Reflect statewide permit of 0.1 mg/L 7

Page F-12: 2. Beneficial Uses and Water Quality Criteria and Objectives, e. Receiving water hardness

- It is completely inaccurate to establish a geometric mean for water hardness when source water quality from Lake Hennessey and the San Andreas Reservoir are totally dissimilar. Receiving water hardness needs to be accurate to the source water in question. 38
- There is no scientific basis for calculating a geometric mean between two water sources that have discrete geologic formations and are not hydraulically connected.

Page F-13: 3. Need for WQBELs, b. Effluent Data

- Remove "EIP Jamieson Canyon" and update to read, "Hennessey Water Treatment Plant and associated Lake Hennessey." 35

Page F-13: 3. Need for WQBELs, c. Ambient Background Data

- City of Napa tests annually for SDWA title 22 required pollutants and results are submitted electronically to the SWRCB. TO references ambient receiving water data was used to represent background conditions and yet MCLs do not represent SDWA and SWRCB Title 22 historical data. 39

CITY OF NAPA
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- City of Napa requests summary of ambient receiving water data used to establish WQBELs. 39

Page F-13: 3. Need for WQBELs, d. Reasonable Potential Analyses

- Receiving source water quality data for Lake Hennessey is submitted electronically to the SWRCB for all priority pollutants with little to no detection. Request removal of reasonable potential due to annual historic data submission to the SWRCB as per the SDWA. 40
- Correction: update Table F-6 to "Table F-3." 42

Page F-16: Footnote (3)

- Source water data is available and sufficient to prove there are no reasonable potential pollutants as annually submitted electronically to the SWRCB. 40

Page F-19: D. Effluent Limitation Considerations, 3. Stringency of Requirements for Individual Pollutants

- Individual pollutant effluent limitations should mirror the SDWA Title 22 and SWRCB requirements as currently required for all drinking water treatment plants. 6

Page F-21: C. Special Provisions, 4. Basis for Construction, Operation, and Maintenance Specifications

- Update reference to indicate "spent backwash water, filter-to-waste or sedimentation desludge decant water" and not wastewater. 3+11

Page F-22: VII. Rationale for Monitoring and Reporting Requirements, A. Effluent and Intake Monitoring

- Request receiving water monitoring in the Tentative Order be removed. It is unclear why the monitoring is necessary and the statewide permit does not require complex monitoring of this degree. In addition, the NPDES permit for the Orinda WTP does not require monitoring for many of these constituents; it requires only monitoring for priority pollutants that weren't monitored during the previous order term. Moreover, the facilities that plan to apply for coverage under this permit already perform a variation of this type of monitoring. The water treatment facilities discharge into the reservoirs that provide source water (intake) into their respective water treatment plants. Hence, the receiving water and source water are equivalent. As required by the California Code of Regulations Title 22, drinking water facilities already perform extensive monitoring of the source water for numerous pollutants. Monitoring data of the source receiving water is already being submitted to another regulatory agency that, like the Regional Water Board, also operates under the State Water Board: the Division of Drinking Water (through its Electronic Data Transfer Library). As the Tentative Order is written now, agencies will need to provide receiving water monitoring data under this permit, creating excessive and *repeated* work to assess what constituents are needed for monitoring, compile the data, and submit the data through another State Water Board database. This redundant and expensive monitoring places unnecessary burden on City staff and is not good use of public resources. (*SFPUC rationale exerpt*) 24



CALIFORNIA WATER SERVICE COMPANY
1720 NORTH FIRST STREET • SAN JOSE, CA 95112-4598
(408) 367-8200

November 4, 2015

Mr. Farhad Azimzadeh
San Francisco Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comment Letter – Tentative Order for Waste Discharge Requirements, NPDES No. CAG382001, for treated water filter backwash.

Dear Mr. Azimzadeh:

California Water Service Company (Cal Water) is an investor-owned water utility that serves over 472,000 customers through 28 Customer and Operations Centers throughout the state. Cal Water operates a potable water treatment system known as the Bear Gulch District water treatment plant, located at 120 Reservoir Road, Atherton, CA. The discharge of filter backwash for Bear Gulch water treatment plant is currently enrolled under Order No. R2-2009-0033, NPDES No. CAG382001.

Cal Water appreciates the opportunity to submit these comments for your consideration on the revised Tentative Order.

Please find our comments as attached in the following table. If you have any questions regarding this issue, please contact me at (408) 367-8324.

A handwritten signature in cursive script that reads "Dale Gonzales".

Dale Gonzales, P.E.
Director, Environmental Affairs
California Water Service Company

CC: Dawn Smithson, District Manager

California Water Service Company
 Comments on R2 RWQCB NPDES Permit for Filter Backwash Discharges
 November 4, 2015

Pg#	Paragraph	Issue/Proposed Change	Comment/Rationale
4	IV. A. Table 2.	Weekly & monthly averages for TSS & Settleable matter	These parameters appear to be carryover from a conventional waste water-type permit and they have limited value as applied to a drinking water discharge permit. Propose to be consistent with the Drinking Water System general NPDES permit by deleting TSS & SS monitoring and utilize the turbidity parameter for analyzing solids.
E-3	Table E-2	Ditto above	Ditto above
F-4	Table F-2	Ditto above	Ditto above
4	IV. A. Table 2.	Total chlorine residual instantaneous limit = 0.0	In the current permit (R2-2009-0033), Tables 1 & 2 on pages 10. & 11, respectively indicate an instantaneous maximum effluent limit for Total chlorine residual of 0.0 mg/L. The table footnote (3) indicates that a concentration of 0.08 mg/L is deemed out of compliance. The tentative Order has no such footnote in Table 2. for chlorine compliance determination. Recommend adding footnote. In addition, propose to maintain consistency with the Drinking Water System general NPDES permit by changing chlorine residual to 0.1 mg/L.
5	V. B. 1.	Receiving water pH shall not be changed by 0.5 pH units in normal ambient pH levels, or the pH shall not be depressed below 6.5 or raised above 8.5. Propose to delete effluent monitoring for pH.	The compliance approach here is consistent with a classic upstream to downstream model. This comparison is not easily applied when the discharge is to a reservoir, which has no upstream/downstream component. That being the case, it is impossible to determine if pH has been changed, since there is no background comparison. More importantly, the small volume of water being discharge is so insignificant in comparison to the volume of the receiving water that it's virtually impossible to change the ambient pH of the receiving water body. If the pH measured in the receiving water is above 8.5 or below 6.5, it's most likely represents ambient conditions.

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California Water Service Company
 Comments on R2 RWQCB NPDES Permit for Filter Backwash Discharges
 November 4, 2015

Pg#	Paragraph	Issue/Proposed Change	Comment/Rationale
7	VI. C. 3. a.-b.	Wastewater facilities review	This requirement is excessive. Operators of water treatment facilities should be allowed to operate and maintain their facilities at their discretion. If the discharge happened to be treated sanitary sewage effluent, perhaps more scrutiny would be appropriate, but this is not conventional waste water. Even the Department of Drinking Water does not require an annual review of the water treatment O&M procedures and they oversee public health. Propose deletion of VI. C. 3. a.-b.
D-1	I. A.2.	Delete reference to compliance with standards for sewage sludge use or disposal established under CWA.	The potable water treatment process does not generate sewage sludge. The sludge that is generated from water treatment should not be held to the same regulatory scrutiny as sewage sludge.
D-4	IV. A.	Delete "sewage"	The water treatment facilities do not treat or handle sewage sludge.
F-2	B. 2. a.	Delete "sewage"	The water treatment facilities do not treat or handle sewage sludge.
D-7	V.C.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."	There is no requirement for reporting sludge sampling results. Does this requirement apply to effluent or receiving water sampling results? If so, where can the DMR form be found?
E-2	III.C.	"When a sampling result is above an effluent limitation or outside of the effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to daily until at least two consecutive daily samples	This requirement is straight forward when measuring total residual chlorine because this is a field determination with an immediate result. Not so for TSS and settleable solids, which are determined by a commercial lab. By the time the sample result is reported for TSS or SS, at least 2 weeks have elapsed. If an excursion occurs triggering daily sampling, by the time the sample results are reported, at least a month will have elapsed since the original sample was collected.

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California Water Service Company
 Comments on R2 RWQCB NPDES Permit for Filter Backwash Discharges
 November 4, 2015

Pg#	Paragraph	Issue/Proposed Change	Comment/Rationale
		demonstrate compliance with the limitation."	Upwards of 14 or more samples will have been collected before the results of initial 2 consecutive samples are received. This requirement becomes even more problematic with regard to Acute Toxicity testing because the test itself requires 5 days. Additionally, there is no value added for this effort which has little, if any environmental benefit.
E-2	Table E-2	The minimum frequency for recording standard observations is 1/day.	Requiring standard observations to be conducted daily is unduly burdensome. Recommend changing the frequency of collecting standard observations to coincide with receiving water sample collection frequency.
E-2	Table E-2-Footnote [3]	"If the Discharger monitors chlorine residual continuously, then the Discharger shall describe any and all excursions of the chlorine limit in the transmittal letter of self-monitoring reports. However, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on discrete readings from the continuous data every hour on the hour."	The Cal Water Bear Gulch Treatment Plant filter backwash discharge is intermittent. When the plant is backwashing, residual chlorine is monitored continuously. The number and time discharge is initiated depends on head-loss across the filter. Residual chlorine is monitored using an in-line analyzer. Current practice is to report a chlorine reading at the start of each backwash and once every 60 minutes from the start of discharge and once per hour thereafter until the backwash cycle is complete. Current data management practice does not accommodate data collection "every hour on the hour". Propose that compliance be based on discrete readings from the continuous data every hour when discharge is occurring.
E-7	VI. 2. iv	Delete "signed by the laboratory director or other responsible official.	The laboratory reports analytical data as a certified analytical report and typically does not "tabulate" or summarize data. Any tabulation/or summarization of these data is performed by the end user (typically the discharger or consultant), and as such, is not certifiable by a laboratory director. Certified analytical reports are generally signed by the laboratory director. If a copy of the certified analytical report is being requested here, please specify.

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California Water Service Company
Comments on R2 RWQCB NPDES Permit for Filter Backwash Discharges
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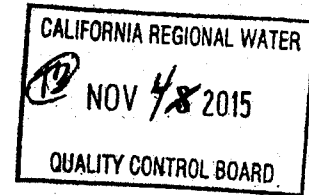
<u>Pg#</u>	<u>Paragraph</u>	<u>Issue/Proposed Change</u>	<u>Comment/Rationale</u>
F-4	Table F-2	Foot note [3] states :" Discharger will be considered out of compliance with the total chlorine residual limit if the effluent concentration is greater than 0.08 mg/L. "	Propose to maintain consistency with the Drinking Water System general NPDES permit by changing chlorine residual to 0.1 mg/L.

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NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS

November 4, 2015

Mr. Bruce Wolfe, Executive Director
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612



Attention: Farhad Azimzadeh, WRC Engineer

Subject: Comment Letter – on Revised Tentative Order (T.O.) for General Waste Discharge Requirements for Discharges of Filter Backwash from Drinking Water Filter Facilities

Dear Mr. Wolfe:

On behalf of the Northern California Regional Water Agency Partners (Agencies) comprised of the San Francisco Public Utilities Commission (SFPUC), City of Napa, California Water Service Company (Cal Water), East Bay Municipal Utility District (EBMUD) and San Jose Water Company (SJWC) we respectfully submit comments in Attachment B COMMENT SUMMARY TABLE for your consideration on the San Francisco Bay Regional Water Quality Control Board's (SFRWQCB) Tentative Order for General Waste Discharge Requirements, NPDES No. CAG382001, for discharges of treated filter backwash from filter facilities to inland surface waters in the San Francisco Bay Region (T.O.). The comments provided in Attachment B are listed in order of priority. Our comments are based on the premise that the permit should take into account the relatively low environmental risk of these facilities. Backwash facilities remove sediment captured during the treatment of drinking water and lack the pollutants of concern which are typically present in POTW and other industrial discharges. The low risk of these facilities formed the basis for the Statewide permit for drinking water systems (Order WQ 2014-0194-DWQ) and this low risk should also be reflected in this permit. /

The Agencies prepared Attachment A - FILTER BACKWASH NPDES PERMIT COMPARISON TABLE as a reference tool for SFRWQCB staff to compare four different sets of NPDES requirements for treated filter backwash discharges. Also included at the far right side of the comparison table, is a summary of the corresponding NPDES permit requirements for the 120 mgd EBMUD Main Wastewater Treatment plant (POTW). In many instances there are fewer requirements for the POTW discharge than for treated filter backwash discharges in the T.O. The Agencies would also like to highlight the Santa Ana Regional Water Board Order No. R8-2015-0004 "General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (de minimis) Threat to Water Quality" that was adopted on June 19, 2015. That Order includes coverage for "Decanted filter backwash wastewater and/or sludge 7

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS

dewatering filtrate water from water treatment facilities." This Order contains a minimum number of effluent limits and monitoring and reporting requirements, consistent with the Statewide General Permit approach.

Throughout much of 2014, the Agencies and other water purveyors throughout the State worked extensively with State Water Board staff to develop the new Statewide General NPDES Permit for Drinking Water System Discharges (Order WQ 2014-0194-DWQ (Statewide General Permit)). The Agencies believe the Statewide General Permit provides an excellent model for regulating the extensive range of drinking system discharges that can, and need to occur, to support water purveyors' essential operations and maintenance activities undertaken to comply with federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water.

The Agencies understand the SFRWQCB is proposing to adopt the T.O. to provide NPDES coverage for a small number agencies that discharge treated filter backwash to surface water. The Agencies understand that the T.O. is a revised version of Order No. R2-2009-0033 (first adopted in 2003 as Order No. R2-2003-0062) that regulated all discharges from surface water treatment facilities in this Region. Most of those discharges are now required to be regulated under the Statewide General Permit. Initial drafts of the Statewide General Permit included coverage for treated filter backwash, but the final version adopted November 18, 2014, excluded coverage. Until the Statewide General Permit is revised to cover treated filter backwash (which the Agencies support), an alternative NPDES permitting mechanism is needed for agencies needing to seek coverage under the SFRWQCB filter backwash NPDES permit.

The Agencies do not believe that the quality of treated filter backwash varies substantively from Region to Region such that it would require significantly differing regulatory approaches from Region to Region. Instead we see this as a Regional permitting issue that would benefit from a SWB state-wide permitting approach, perhaps implemented through minor modifications to the existing Statewide General Permit.

The Agencies bring up these points because we strongly believe discharges to surface waters of treated filter backwash, pose an insignificant (de minimis) threat to water quality and should be regulated accordingly. This finding is in accordance with State Water Board fee regulations, where discharges regulated by general permit and that require minimal treatment systems to meet limits, are found to pose no significant threat to water quality and therefore are of low threat and complexity {page 9, 2015-16 Fee Schedule, Item (9) footnote 24 defines de minimis discharges to include "water treatment plant discharges; and other similar types of wastes that have low pollutant concentrations and are not likely to cause or have a reasonable potential to cause or contribute to an adverse impact on the beneficial uses of receiving waters yet technically must be regulated under an NPDES permit."}

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS

The Agencies have reviewed the T.O. in detail and conclude that the proposed effluent limits, monitoring, and reporting requirements in the T.O. are excessive and unnecessary given the insignificant (de minimis) threat to water quality that these discharges pose. The requirements are primarily carried forward from the prior 2009 Order with the exception of some effluent limits being deleted. However, a new copper effluent limit has been added, that would be applicable to all dischargers seeking coverage under this General Permit. Copper was only detected above the corresponding water quality objective (WQO), in the discharge of one discharger, thus the Agencies question the appropriateness, and equity of establishing effluent limits in a General Permit in this manner. 7

Given these circumstances, and that there are a small number of potential permittees, this would seem to argue for issuing new individual permits instead of a General Permit. This would allow for site specific effluent and receiving water conditions to be taken into effect in and when effluent limits need to be adopted, including use of site specific dilution factors, metals translators, and hardness values. A recent model would be the individual NPDES permit for EBMUD's Orinda Filter Plant treated filter backwash discharge (Order No. R2-2015-0041). |

The Agencies provide the following recommendations, in order of preference and recognizing that state-wide efforts will take longer than region-only actions:

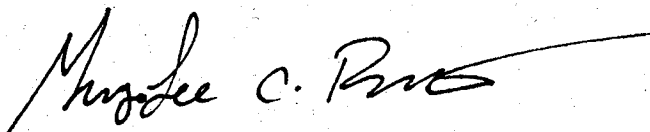
- 1) Continue to administratively extend Order No. R2-2009-0033 to provide NPDES coverage for water agencies requiring coverage. Participate in collaborative state-wide efforts with SWB staff and water agency stakeholders to develop modifications to the Statewide General Permit and the Categorical exemption, as needed, to provide coverage for treated filter backwash discharges. |
- 2) Issue individual NPDES permits to agencies in need of coverage, using the effluent limit and monitoring and reporting approaches included in the Statewide General Permit. |
- 3) Incorporate the Agencies' detailed comments on the T.O provided in Attachment B, such that the T.O. requirements are consistent with the approach of the Statewide General Permit requirements and with the approach of other low threat to water quality general permits (e.g., Santa Ana Region).

The Agencies submit these comments and suggestions in the spirit of SWB Resolution No. 2013-0029 "*Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of Compliance While Maintaining Water Quality Protection.*"

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS

The Agencies support issuance of a practical permit that is protective of water quality and that provides regulatory clarity and the standardization of compliance practices across the region for these de minimis low threat drinking water system discharges.

The Agencies appreciate the opportunity to provide comments on the SFRWQCB Tentative Order for General Waste Discharge Requirements, for Discharges of treated filter backwash from filter facilities to inland surface waters in the San Francisco Bay Region and we look forward to continuing to work with you to implement a meaningful program to protect water quality. If you have any comments or questions regarding the content of this letter, please feel free to contact me at 510-287-0327 or via email at gbuncab@ebmud.com.



Greg Buncab

On behalf of the Northern California Regional Water Agency Partners
Senior Environmental Health and Safety Specialist
East Bay Municipal Utility District

cc:

Steve Ritchie, San Francisco Public Utilities Commission
Erin Kebbas, City of Napa
Mark Bloom, California Water Service Company
Casey Claborn, San Jose Water Company

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
 ATTACHMENT A - FILTER BACKWASH NPDES PERMIT COMPARISON TABLE

PERMIT REQUIREMENT	STATEWIDE NPDES PERMIT FOR DRINKING WATER SYSTEM DISCHARGES ORDER NO. 2014-0754-DWQ	SANTA ANA RIVIERA ORDER NO. 18-2015-0004	EBMUD ORINDA SWTP ORDER NO. 12-2015-0041	R2 FILTER BACKWASH T.O. ORDER NO. 12-2015-0001	EBMUD MAIN WWTP ORDER NO. 12-2015-0018
What is Covered	Short-term or seasonal planned and emergency (unplanned) discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water.	Decanted filter backwash wastewater and/or sludge dewatering filtrate water from water treatment facilities	Continuous clarified filter backwash discharge from EBMUD Orinda WTP. One discharge point EFF-003.	Discharges of treated filter backwash from drinking water filter facilities to inland surface waters	Secondary Treated Municipal Wastewater from EBMUD's 120 MGD Main Wastewater Treatment Plant and EBMUD's Interceptor Conveyance System
pH (std. units)	Do not alter rcvg. wtr. outside the range of 6.5 - 8.5	6.5 - 8.5	Inst. Min - 6.5 Inst. Max - 8.5	Do not alter rcvg. wtr. outside the range of 6.5 - 8.5	Inst. Min - 6.5 Inst. Max - 8.5
Total Cl ₂ Residual (mg/L)	0.019 compliance based on 0.1	0.1	Inst. Max - 0.0 compliance based on 0.1	Inst. Max - 0.0	Inst. Max - 0.0
Turbidity (NTU)	100 (action level)				
TSS (mg/L)		Max Daily - 30	Avg monthly - 30 Avg Wkly - 45	Avg monthly - 30 Avg Wkly - 45	Avg monthly - 30 Avg Wkly - 45
Settleable Matter (ml/L-hr)			Avg monthly - 0.1 Max Daily - 0.2	Avg monthly - 0.1 Max Daily - 0.2	
Copper (µg/L)					
Dichlorobromomethane (mg/L)			Avg monthly - 3.2 Max Daily - 4.4	Avg monthly - 4.3 Max Daily - 8.6	Avg monthly - 47 Max Daily - 85
Oil and Grease (mg/L)					Avg monthly - 10 Max Daily - 20
Carbonaceous Biochemical Oxygen Demand, 5-day @ 20°C (CBOD ₅)					Avg monthly - 25 Avg Wkly - 40
Cyanide (µg/L)					Avg monthly - 20 Max Daily - 39
Hexachlorobenzene (µg/L)					Avg monthly - 0.0076 Max Daily - 0.015
Dioxin-TEQ (µg/L)					Avg monthly - 1.4 x 10 ⁻⁸ Max Daily - 2.8 x 10 ⁻⁸
Total Ammonia (mg/L as N)					Avg monthly - 84 Max Daily - 110
Acute Toxicity (% survival)		3-sample median - 90% 1-sample maximum - 70%	3-sample median - 90% 1-sample maximum - 70%	3-sample median - 90% 1-sample maximum - 70%	11-sample median value of not less than 90 percent survival; and An 11-sample 90th percentile value of not less than 70 percent survival.

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
 ATTACHMENT A - FILTER BACKWASH NPDES PERMIT COMPARISON TABLE

PERMIT REQUIREMENT	STATEWIDE NPDES PERMIT FOR DRINKING WATER SYSTEM DISCHARGES ORDER NO. 2014-0194-DWQ	SANTA ANA RWQCB ORDER NO. RB-2015-0004	EDMUND ORINDA SWTP ORDER NO. R2-2015-0041	R2 FILTER BACKWASH T.O. ORDER NO. R2-2015-0001	EDMUND MAIN WWTP ORDER NO. R2-2015-0018
Flow rate & volume Standard Observations	All planned discharges	Daily	Continuous Daily	1/Day	Continuous Daily
Total Cl ₂ Residual	Sampled only for for superchlorinated and discharges > 1AF	During the first 30-min of each discharge then wily, thereafter; or as directed by the Executive Officer	1/Hour	1/4 Hours	Continuous or 1/Hour
pH	Sampled only for superchlorinated discharges		2/Week	2/Year	2/Week
Turbidity	Sampled only for Well Development and/or Rehabilitation Visual assessment for superchlorinated and discharges > 1AF		1/Month	2/Year	4/Week
TSS			1/Month	2/Year	
Settleable Matter			1/Month	2/Year	
Dichlorobromomethane			1/Quarter	2/Year	1/Month
Azide Toxicity			Once per permit term	2/Year	1/Quarter
Chromic Toxicity					
Aluminum					
Iron					
Manganese					
Copper, Total Recoverable					
Other priority metals (Zinc, Mercury, Selenium, Arsenic, Chromium (VI), Lead, Nickel, Silver)					
Other Priority Pollutants			Once during the term of this Order - Monitoring is not required for pollutants sampled within the previous order term and not otherwise listed in this table.	Once during the term of this Order. Monitoring shall be completed within 12 months of the due date for the new NOI.	Once per year
Standard Observations	Visual monitoring for planned direct discharges to receiving waters	Weekly. Observe for oil sheen or coloration		1/Day	
Dissolved Oxygen					
Turbidity					
TSS					
Temperature					
pH					
Hardness					
Arsenic, Cadmium, Copper, Chromium (VI), Lead, Nickel, Selenium, Silver, Zinc					
Mercury, Total Recoverable					
Chloroform					
Dichlorobromomethane					
Chlorodibromomethane					
Bromoform					
Other Priority Pollutants			2/Year	At least annually and for at least the first two years.	
			Once during the term of this Order - Monitoring is not required for pollutants sampled within the previous order term and not otherwise listed in this table.		

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
ATTACHMENT B – COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
1	<p>Potable Water Discharge Regulatory Consistency</p> <p>The Agencies strongly request the SF Regional Water Quality Control Board (SFRWQCB) align effluent limitations, monitoring requirements and general permit language with the Statewide NPDES Permit for Drinking Water System Discharges Order WQ 2014-0194-DWQ General Order No. CAG140001. The agencies seeking coverage under the SFRWQCB T.O. will also be covered under the Statewide permit and aligning the two permits would be efficient and cost-effective for the Agencies.</p>	Throughout	Make the SFRWQCB Filter Backwash NPDES Permit consistent with the Statewide NPDES Permit for Drinking Water System Discharges.
2	<p>Clarification of Permit Scope</p> <p>Clarify the scope of the R2 T.O. to indicate only planned treated filter backwash discharges are covered.</p>	Attachment A (Page 3 Section I)	<p>I. SCOPE OF GENERAL PERMIT <i>These Waste Discharge Requirements (WDRs) shall serve as an NPDES General Permit for planned discharges of treated filter backwash from drinking water filter facilities to inland surface waters.</i></p> <p><i>This Order does not cover discharges that can be covered under Statewide General NPDES Permit for Drinking Water System Discharges (Order WQ 2014-0194-DWQ, NPDES No. CAG140001), hereinafter referred to as the Statewide General Permit. These discharges may include emergency (unplanned) discharges of treated filter backwash.</i></p> <p>Fact Sheet (Attachment F) sections I and II provide additional information describing treated filter backwash discharges.</p>

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
ATTACHMENT B – COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
3	<p>Addition of Definitions</p> <p>For consistency with the Statewide NPDES Permit for Drinking Water System Discharges, add definitions for <i>drinking water system discharges</i>, <i>planned discharges</i>, and <i>emergency discharges</i> to Attachment A of the Tentative.</p>	<p>Attachment A – DEFINITIONS (Pages A-1 through A-4)</p>	<p>Drinking Water System Discharges Release of flows from drinking water intakes, transmission, storage, pumping, treatment and distribution systems including flows due to: (1) system failures and pressure releases, (2) system development, testing and maintenance that is performed to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and State Water Board Division of Drinking Water permit requirements.</p> <p>Planned Discharge A discharge that is regularly scheduled, automated, or non-regularly scheduled that must take place to comply with mandated regulations and that the water purveyor knows in advance will result in a discharge to surface water (i.e., through a constructed storm drain or through another conveyance system, to waters of the United States (U.S.)).</p> <p>Emergency Discharge A discharge due to a sudden unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services, including the provision of drinking water supplies in accordance with applicable drinking water statutes and regulations.</p>
4	<p>Effluent Limitations</p> <p>The Tentative Order includes effluent limits for parameters which are unnecessary because they will not result in an identifiable benefit to the reservoirs or otherwise protect water quality. In addition, these parameters are not regulated in the Statewide General NPDES Permit for Discharges from Drinking Water Systems (Order WQ 2014-0194-DWQ).</p>	<p>Page 4 Table 2</p>	<p>Revise Table 2 by removing effluent limitations for TSS, Settleable Matter and Acute Toxicity and associated footnotes</p>

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
5	<p>Excessive Effluent Monitoring</p> <p>Chlorine. Language regarding continuous monitoring and reporting for total chlorine residual is not clear. The language in the SFRWQCB Filter Backwash T.O. appears to be copied from recently adopted NPDES permits for discharges of treated wastewater effluent in the Bay Area, such as those for the East Bay Municipal Utilities District (EBMUD) Main Wastewater Treatment Plant (Order No. R2-2015-0018) and the Las Gallinas Valley Sanitary District Sewage Treatment Plant (Order No. R2-2015-0021).</p> <p>Metals and trihalomethanes. It is not clear why semiannual monitoring of metals and trihalomethanes are necessary. The Fact Sheet states monitoring is necessary to verify reasonable potential. However, other than copper, reasonable potential was not triggered and is not expected for any of the metals and trihalomethanes. There is also no basis for requiring the use of ultraclean mercury monitoring procedures which are staff-intensive and expensive.</p> <p>Other Priority Pollutants. Priority pollutant monitoring is not required in Order No. R2-2009-0033. Furthermore, a clear justification has not been made as to why it is necessary in the filter backwash permit. The Agencies would like to cite State Implementation (SIP) for Priority Pollutants (PP) Section 1.3, "The RWQCB shall require periodic monitoring (at least once prior to the issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established; however, the RWQCB may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from this monitoring requirement." The Agencies request the SFRWQCB exercise their discretion in exempting filter backwash discharges from priority pollutants.</p>	<p>Page E-3 – E-6 Section III.E Section V.A</p>	<p>The effluent monitoring in Table E-2 in the Tentative Order is excessive compared with the statewide permit, including many pollutants of no possible environmental consequence. These pollutants are very unlikely to be present in a drinking water reservoir or in sediment from treatment of reservoir water. Removing many of these parameters would bring better consistency with the statewide permit, which has annual representative monitoring for only volume, chlorine, and turbidity Removal of the excessive monitoring will also help control compliance costs.</p> <p>Chlorine. Change permit language to clarify the required monitoring and reporting of continuous monitoring data for total chlorine residual. This language would clearly indicate how staff should report data from continuous analyzers.</p> <p>Metals and trihalomethanes. If this monitoring is retained, the Agencies request (1) the addition of a footnote to allow monitoring for total chromium instead of hexavalent chromium and (2) the re-addition of a footnote that monitoring is only required for the first two years of once during the permit period. The latter footnote was removed from the previous public Tentative Order. Furthermore, Fact Sheet language on pages F-22 – F-23 are consistent with this footnote. There is also no basis for requiring the use of ultraclean mercury monitoring procedures which are staff-intensive and expensive.</p> <p>Other Priority Pollutants. If priority pollutant monitoring is still required, the requirement should be consistent with the requirements in the NPDES permit for the Orinda Water Treatment Plant (Table E-2 footnote 6); priority pollutant monitoring is not required for pollutants sampled within the previous order term and no otherwise listed in Table E-2.</p>

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
6	<p>Excessive Standard Observations monitoring</p> <p>The Tentative Order contains new daily monitoring requirements for standard observations in the discharge and receiving water. These monitoring requirements are onerous and excessive. Performing daily observations and record-keeping for both the discharge and receiving water would be a major burden on staff workload and take away valuable staff time currently dedicated towards proper operations of the drinking water facilities.</p> <p>The Agencies would like to note that standard observations are not required in the NPDES permits for treatment plants in the Bay Area that discharge wastewater of much larger volumes (e.g., NPDES permits for the SFPUC's Southeast Water Pollution Control Plant and EBMUD'S Special District No. 1 Main Wastewater Treatment Plant) nor for the Orinda Water Treatment Plant (Order No. R2-2015-0041).</p>	<p>Page E-3 Table E-2 Section III.E</p> <p>Page E-5 - E-6 Table E-3 Section V.A</p>	<p>Remove the monitoring requirements for standard observations</p>
7	<p>Grab samples collection during maximum daytime flow.</p> <p>Discharge flows fluctuate in an unpredictable manner during the day; hence, collecting samples during periods of daytime maximum flow may not be feasible at times.</p>	<p>Page E-2 Section III.D</p>	<p>Remove the daytime maximum flow language for grab sampling.</p> <p>III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS</p> <p>A. Grab samples shall be collected on random days during periods of daytime maximum flow (if flow varies significantly during the day).</p>

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
8	<p>Excessive Requirements for Status Reports</p> <p>Differences among the Wastewater Facilities Status Reports, Operations and Maintenance Status Reports, and Best Management Practices (BMPs) Plan are not clear. Section VIII lists items required in the site-specific BMPs Plan; however this list of items overlaps with the requested information for wastewater report and O&M Manual. Repeated items include the description of processes, maintenance procedures and schedules, and identification of responsibilities. The repeated language will generate both confusion among agency staff and additional work to develop multiple documents that contain the same information. Order No. 2009-0033 already requires this information to be included in one single location: the BMPs Plan. As such, the Agencies consider the BMPs Plan to be an inclusive document. Implementation of the BMPs Plan will ensure that facilities are properly operated and maintained as required by 40 CFR 122.41.</p>	<p>Pages C-2 – C-3 Attachment C Section VII; also Section VI.C.3 (pages 7 & 8)</p>	<p>Remove the provisions for Wastewater Report and O&M Manual while retaining the current BMPs Plan language in Attachment C.</p>

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
9	<p>Inclusion of filter-to-waste</p> <p>The Tentative Order narrows the scope of the general permit to include <i>only</i> discharge of treated dechlorinated filter backwash;</p> <p>coverage for a filter-to-waste stream is not mentioned. The lack of coverage for the filter-to-waste stream is problematic for the Agencies that would be seeking coverage under the T.O. Facilities would potentially have two different permits applying to the same discharge (combined backwash and filter-to-waste flows)</p>	<p>Page F-3 Section II.B</p>	<p>Include language in the T.O. to allow coverage for the filter-to-waste stream.</p> <p>B. General Description of Coverage</p> <p>1. This Order covers the discharge from settling basins or clarifiers of <u>both</u> treated dechlorinated filter backwash <u>and</u> <u>filter-to-waste (rewash) water</u> to inland surface waters. At least two dischargers are anticipated to seek coverage under this Order. The dischargers include (1) San Francisco Public Utilities Commission (SFPUC), Harry Tracy Water Treatment Plant and associated San Andreas Reservoir; and (2) the City of Napa (Napa), EIP Jameson Canyon Water Treatment Plant and associated Lake Hennessey.</p> <p><u>Filter-to-waste (rewash) water is generated by filters immediately after being placed back into service following backwashing. This water is generally of very high quality and amounts to approximately 0.5 percent of the total amount of water filtered. Filter backwash and filter-to-waste streams will typically account for most of the volume of wastewater discharged from water treatment plants. Using estimates of 2 – 10 percent of plant production for filter backwash and 0.5 percent of plant production for filter-to-waste or rewash water, wastewater discharges from water treatment plants can amount to approximately 25,000 – 105,000 gallons per million gallons of production.</u></p> <p><u>Throughout this Order, the term "treated filter backwash" includes both treated dechlorinated filter backwash and filter-to-waste (rewash) water.</u></p>

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
10	<p>The provisions for applying the intake water credit are taken from SIP section 1.4.4 but have been modified and consequently do not apply to all discharges regulated by this permit. Specifically permittees are now required to demonstrate compliance with certain criteria D.1.b. (i. through iv.) which are discretionary in the SIP but not in the TO. These criteria are for streams and are not appropriate for reservoirs. For example the following criterion makes sense when applied to streams but not to a reservoir:</p> <p>“iv. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been taken by the Discharger.”</p>	<p>Page 8-9 Section VI.D.1.b.i – iv</p>	<p>b. The intake water shall be from the same water body as the receiving water body. To qualify for intake water credit based limitations, the Discharger [add “may” and delete “shall”] demonstrate that it meets this condition in an attachment to its NOI by showing all of the following:</p> <p>i. The ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility’s discharge, is similar to that of the intake water.</p> <p>...</p> <p>Also, after D.1.b.iv, add the following from the SIP which provides the Regional Board more flexibility:</p> <p>“The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body. In the case of reservoirs, lakes, or other large waterbodies, the Discharger may provide facility diagrams or other documentation to demonstrate that the intake water is from the same water body as the receiving water body.”</p>

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
 ATTACHMENT B – COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
11	<p>Insufficient justification for TSS and Settleable Matter</p> <p>The two technology-based limitations (TSS and Settleable Matter) have not been established based on the procedures identified in the Fact Sheet in Section IV.B (page F-9). For TSS, the two-part reasonableness test for best conventional pollutant control technology (BCT) has not been completed (also see: 40 CFR 125.3). In addition, the BAT procedures have not been applied to Settleable Material. We have requested that these two limitations be removed for consistency with the Statewide General Permit, however, if that is not possible, the Fact Sheet should include the required demonstration for technology-based limitation.</p> <p>We also note that the TSS effluent limits were originally developed for sewage treatment plants that provide secondary treatment. They are included in Table 4-2 of the Basin Plan, which states that the Water Board may also apply these TSS limitations selectively to certain other non-sewage discharges. There is no basis for applying these limits to backwash discharges.</p>	<p>Page F-10 Section IV. B.1.b. & c.</p>	<p>The Fact Sheet (page F-10) describes BCT:</p> <p>c. Best conventional pollutant control technology (BCT). BCT represents the control from existing industrial point sources of conventional pollutants, including biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. BCT standards are established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.</p> <p>This section should be followed by the material supporting the TSS limit determination. Similarly, IV.B.1.c should include the BAT demonstration for Settleable Material.</p>

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
12	<p>As noted above we have requested the removal of the Settleable Solids limitation. An additional concern regarding Settleable Material is that the TO incorrectly applies Table 4-2 from the Basin Plan. A footnote to Table 4-2 states:</p> <p>e. Discharges from sedimentation and similar cases should generally not contain more than 1.0 ml/l-hr of settleable matter....</p> <p>The backwash is treated by sedimentation and therefore this footnote appears directly applicable.</p>	<p>Page 4 Section IV.A Effluent Limitations</p>	<p>The preference of the group is that Settleable Material be removed as a limitation for consistency with the Statewide General Permit and because it has not been supported by the required demonstration for technology-based limitations. However, if removal is not possible the limitation should be changed to 1.0 ml/l-hr of settleable matter.</p>

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ATTACHMENT B -- COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
13	<p>Conflicting Five-Day Reporting Requirements</p> <p>Attachment D section V.E.1 of Order No. R2-2009-0033 requires that five-day reports be submitted to describe noncompliance that may endanger health or the environment. The T.O. has the same language in Attachment D, but it also contains additional language about the five-day report requirement in Attachment E section VI.D.3. (page E-13). The Agencies are concerned that having the same requirements in two places in the permit will confuse staff who are trying to diligently complete these reports.</p>	<p>Page E-13 Section VI.D.3</p>	<p>Revise language in Attachment E and have it refer to Attachment D for consistency.</p> <p>D. Violations and Unauthorized Discharges</p> <p>3. If requested by Regional Water Board staff, the Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification. A report submitted electronically is acceptable. The written report shall include the following items indicated in Attachment D section V.E.1. of this Order.</p> <ul style="list-style-type: none"> a. Date and time of violation or spill, and duration if known b. Location of violation or spill (street address or description of location) c. Nature of violation or material spilled d. Quantity of any material involved e. Receiving water body affected, if any f. Cause of violation or spill g. Estimated size of affected area h. Observed impacts to receiving waters (e.g., oil sheen, fish kills or water discoloration) i. Corrective actions taken to correct violation or to contain, minimize, or clean-up spill j. Future corrective actions planned to prevent recurrence and implementation schedule and k. Persons or agencies notified

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COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
14	Clarification regarding Bypass Discharge Prohibition	Page 4 Section III Page F-8	<p>III. DISCHARGE PROHIBITIONS</p> <p>B. Bypassing settling basins or clarifiers, as identified in the NOI, is prohibited, <u>except as provided in Attachment D sections I.G.2 and I.G.3 of this Order.</u></p> <p>IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS</p> <p>A. Discharge Prohibitions</p> <p>e. b. Discharge Prohibition III.B. (No bypassing settling basins or clarifiers). This prohibition requires that discharges not bypass settling basins or clarifiers because these units are the primary form of pollutant control at the facilities this Order covers. These units will be identified in the NOI and will be considered as part of granting discharge authorization. Bypassing could greatly reduce discharge quality. This prohibition is based on 40 C.F.R. section 122.41(m), which generally prohibits bypasses (see Attachment D, section I.G), <u>except as noted in Attachment D sections I.G.2 and I.G.3 of this Order.</u> This prohibition is revised to be more specific and clearer owing to the narrower scope of this Order from the previous order. This Order covers only discharges of treated filter backwash; the previous order had covered all other discharges from drinking water treatment plants that could have included other forms of treatment.</p>
15	<p>Discharge Prohibitions</p> <p>Discharge Prohibition III.C implements California Water Code section 13050. However, this conflicts with Finding II.C, which states this permit is not intended to implement state law.</p>	Page 3-4 Discharge Prohibition III.C	<p>Reconcile the conflicting language.</p>

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ATTACHMENT B – COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
16	<p>Receiving Water Limitations</p> <p>Clarify receiving water limitations to indicate that discharges will not alter certain conditions outside the near-field mixing zone. Section 3.1 of the March 2015 Basin Plan indicates that the water quality objectives cannot be applied at or immediately adjacent to effluent discharge structures. Within the near-field mixing zone, some alteration may occur, albeit in a very small area.</p> <p>Temperature</p> <p>Include additional language for temperature receiving water limit for consistency with other receiving water limitations and for consistency with the Basin Plan.</p> <p>References to 'sewage' and 'sewage sludge'</p> <p>The potable water treatment process does not generate sewage sludge. The State Water Resources Control Board determined that discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water are low threat de minimis discharges and the wastewater generated from water treatment should not be placed in the same category as sewage or wastewater sludge and held to the same regulatory scrutiny as sewage sludge.</p>	<p>Pages 4-5 Section V.A Section V.B</p>	<p>V. RECEIVING WATER LIMITATIONS</p> <p>B. Discharge shall not cause the following conditions to exist in receiving waters outside the near-field mixing zone at a location not impacted by the discharge (i.e., where mixing is not controlled by discharge momentum and buoyancy):</p> <p>C. Discharge shall not cause the following limits to be exceeded in receiving waters outside the near-field mixing zone at a location not impacted by the discharge (i.e., where mixing is not controlled by discharge momentum and buoyancy):</p>
17	<p>Temperature</p> <p>Include additional language for temperature receiving water limit for consistency with other receiving water limitations and for consistency with the Basin Plan.</p> <p>References to 'sewage' and 'sewage sludge'</p> <p>The potable water treatment process does not generate sewage sludge. The State Water Resources Control Board determined that discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water are low threat de minimis discharges and the wastewater generated from water treatment should not be placed in the same category as sewage or wastewater sludge and held to the same regulatory scrutiny as sewage sludge.</p>	<p>Pages 5 Section V.A.6</p>	<p>6. Alteration of temperature beyond present natural background levels that cause nuisance or adversely affect beneficial uses;</p>
18	<p>References to 'sewage' and 'sewage sludge'</p> <p>The potable water treatment process does not generate sewage sludge. The State Water Resources Control Board determined that discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water are low threat de minimis discharges and the wastewater generated from water treatment should not be placed in the same category as sewage or wastewater sludge and held to the same regulatory scrutiny as sewage sludge.</p>	<p>Page D-1 Section I.A.2 Section I.C</p> <p>Page D-4 Section IV.A</p> <p>Page D-7 Section V.C.2-3</p> <p>Page D-8 Section V.F.3</p>	<p>Make a wholesale change throughout the T.O. by removing references made to 'sewage' and 'sewage sludge'.</p>

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
ATTACHMENT B - COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
19	<p>Accelerated monitoring.</p> <p>A frequency increase to daily monitoring until two consecutive daily samples comply with the limitations is impractical. Typically, there is a time lag between when a sample is collected and when laboratory results are finalized. Data for many constituents are often not available for 2-3 weeks for some parameters depending on testing lead times. Daily sampling would be extremely difficult logistically; scheduling the sampling and testing (which include mobilizing staff, equipment and supplies) would be a major burden for plant and laboratory staff given their existing workloads.</p>	<p>Page E-2 Section III.C</p>	<p>Request this frequency be changed to weekly when practicable.</p> <p>III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS</p> <p>D. When a sampling result is above an effluent limitation or outside of the effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to <u>daily weekly as soon as practicable</u> until at least two consecutive <u>daily</u> samples demonstrate compliance with the limitation.</p>
20	<p>Clarification/Addition to Fact Sheet</p>	<p>Page F-2 Section II.A.1</p>	<p>Revise the discharge description to clearly state that primarily potable water is used to remove accumulated materials from the filters, treated typically by sedimentation to remove dislodged materials, and released to a surface water body which is oftentimes the source of supply for that filter plant. The intent of this comment is to capture the fact that filter backwash discharges are primarily potable water, not what is typically considered as wastewater (i.e. municipal).</p>
21	<p>Clarification/Addition to Fact Sheet</p>	<p>Page F-3 to F-4</p>	<p>Include historical discharge data from the previous permit term in Tables F-1 and F-2. This information would be valuable for dischargers in assessing the applicable permit requirements.</p>
22	<p>Clarification/Addition to Fact Sheet</p>	<p>Page F-5 Section II.E</p>	<p>Include historical data referenced in Section E. Compliance Summary. The data would further substantiate the de minimis nature of the discharges and their limited potential for impacts on beneficial uses.</p>
23	<p>This prohibition appears to conflict with Finding II. C. "Provisions and Requirements Implementing State Law. No provisions or requirements in this Order are included to implement State law only."</p>	<p>Page F-9 - IV. A 1.c. Discharge Prohibition III.C.</p>	<p>(Discharge shall not cause a condition of pollution, contamination, or nuisance). This is a general prohibition which is based on the California Water Code. It should be removed.</p>

NORTHERN CALIFORNIA REGIONAL WATER AGENCY PARTNERS
 ATTACHMENT B – COMMENT SUMMARY TABLE

COMMENT NO.	COMMENT	PERMIT REFERENCE	RECOMMENDED REVISIONS
24	Typographical Error	Page 3 Section II.B	<p>A. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through E are also incorporated into this Order.</p>
25	Typographical Error	Page E-3 – E-4 Section III.E Table E-2	<p>Correct typographical error in Table E-2 for “Other Pollutants”, which should refer to Fact Sheet Table F-3, not Fact Sheet Table F-6.</p>
26	Typographical Error	Page F-7 Section III.D	<p>In October 2011 <u>July 2015</u>, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources.</p>
27	Typographical Error	Page F-10 Section 2.a.i.	<p>....this Order retains the effluent limitations for TSS of an average monthly effluent limit (AMEL) of 30 mg/L and a maximum “daily” and add: “weekly” average effluent limit (MDEL) of 45 mg/L from the previous order. (However, as requested above, we request removal of the TSS limits).</p>
28	Typographical Error	Page F-22 Section IV.D	<p>D. Intake Water Credit Based Limitations Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the intake water credit based limits with the exception of condition (+) (2) of SIP section 1.4.4. Condition (+) (2) requires consistency with any applicable TMDL....</p>

Appendix C
Response to Comments

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

RESPONSE TO WRITTEN COMMENTS

on Tentative Order for
General Waste Discharge Requirements for
Discharges of Filter Backwash from Drinking Water Filter Facilities

Regional Water Board staff distributed a tentative order for public review from October 5 through November 4, 2015. At the close of the comment period, Board staff received comment letters from four parties, as follows:

1. San Francisco Public Utilities Commission (SFPUC)
2. City of Napa (Napa)
3. California Water Service Company (CWSC)
4. Northern California Regional Water Agency Partners (NCRWAP)

Board staff has summarized the comments as shown below in *italics* (paraphrased for brevity) and followed each comment with a response. We have grouped and organized the comments to correspond generally to the sections in the tentative order. For the full content and context of the comments, please refer to the comment letters.

We show all revisions to the tentative order with underline text for additions and strikethrough ~~text~~ for deletions. This document also shows a staff-initiated typographical correction to the tentative order.

I. SCOPE OF GENERAL PERMIT

Comment 1 (Napa and NCRWAP): *The commenters requested changes to the type of permit, which included issuing one of the following permits instead of the tentative order (i.e., a regional general permit):*

- *Revise the tentative order such that the language and requirements are consistent with the Statewide General Permit for Drinking Water System Discharges 2014-0194-DWQ (Statewide General Permit).*
- *Issue new individual permits with language and requirements the same as the Statewide General Permit.*
- *Issue a revised Statewide General Permit with minor modifications that include filter backwash water.*
- *Provide an administrative extension of the expired general permit (R2-2009-0033) until a revised Statewide General Permit is issued that includes filter backwash discharges.*
- *Issue new individual permits that are specific to each facility.*
- *Issue new individual permits with language and requirements the same as the Orinda individual permit (R2-2015-0041).*

Response to Comment 1: We disagree with the requests. Concerning the issuance of permits consistent with the Statewide General Permit, the State Water Board excluded coverage of filter backwash water from its permit because these discharges:

- May have higher levels of pollutants than typical drinking water system discharges,
- Are not short term, and
- Do not qualify for the exception from the Policy for Implementation of Toxics Standards (SIP).

Further, the SIP prescribes the methodology for setting effluent limits for toxic pollutants for all discharges unless excluded. Because filter backwash discharges do not qualify for the SIP exception, this tentative order must follow the SIP. Therefore, it would be inappropriate to apply the effluent limits and requirements from the Statewide General Permit to the tentative order or to any individual permits.

In addition, we disagree to an administrative extension of the expired permit because it is unlikely that the State Water Board will revise its Statewide General Permit in the near future to include filter backwash discharges. General permits should be continued only as a last resort¹.

Concerning the issuance of individual permits specific to each facility or the same as the Orinda permit, the U.S. EPA allows a general permit that covers multiple facilities that have similar discharges and are located in specific geographic areas. Issuing a general permit ensures consistency of permit conditions for similar facilities. Because the tentative order fits the U.S. EPA's criteria for general permits, it is unnecessary to issue individual permits. Further, the Orinda permit was an individual permit that was for a particular location, discharge, and receiving water; Orinda's requirements do not necessarily fit those of the general permit that was issued for multiple facilities over a geographic area with similar discharges.

Comment 2 (NCRWAP): *The commenters requested clarification to the scope to indicate that only planned treated filter backwash discharges are covered under the tentative order. For consistency with the Statewide General Permit, the commenters requested the addition of definitions for drinking water system discharges (i.e., planned, unplanned, and emergency discharges) to Attachment A.*

Response to Comment 2: We partially agree. We have clarified the scope in section I of the tentative order as shown below. Further, this revision is consistent with finding II.B.2 of the Fact Sheet.

I. Scope of General Permit

These Waste Discharge Requirements (WDRs) shall serve as an NPDES General Permit for discharges of planned treated filter backwash from drinking water filter facilities to inland surface waters.

However, adding definitions for drinking water discharges (i.e., planned, unplanned, and emergency discharges) to Attachment A would introduce inconsistencies between the Statewide General Permit for drinking water and this tentative order for filter backwash discharges. For example, the Statewide General Permit defines drinking water system discharges and emergency discharges as follows:

¹ Memorandum on Continuance of NPDES General Permits. U.S. EPA. 1984.

Drinking Water System Discharges

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

Drinking Water Emergency Discharge

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

However, the tentative order defines filter backwash as:

Fact Sheet Section II.A.d

. . .the term “filter backwash” and “filter backwash wastewater” includes the water used to spray-wash, filter backwash, filter-to-waste (rewash), and any other settling basin sedimentation desludge decant water. The filter backwash wastewater flows into settling basins where the solids in the filter backwash settle out. Clarifiers may also be used to remove solids from filter backwash in place of, or in addition, to settling basins.

As shown above, drinking water discharges are different from filter backwash water discharges, and the two definitions are inconsistent. Therefore, the requested definitions have not been included in the tentative order.

Comment 3 (SFPUC, Napa, and NCRWAP): *The commenters requested language to allow coverage for the filter-to-waste stream and sedimentation desludge decant water.*

Response to Comment 3: We agree. We have made the following changes to Fact Sheet sections II.A.1.b through II.A.1.d, which clarifies the scope of coverage:

II. FACILITY DESCRIPTION

A. Filter Backwash Treatment and Discharges

1. Description . . .

- a.** . . .
- b.** After the wash cycle occurs, backwashing begins and previously filtered water flows through the filter in the reverse direction. Most or all of the accumulated particles are flushed out.
- c.** The filter is then rewashed (filter-to-waste) ~~refilled with source water~~ and put back on line.
- d.** Throughout this Order, the term “filter backwash” and “filter backwash wastewater” includes the water used to spray-wash, filter backwash, filter-to-waste (rewash), and any other settling basin sedimentation desludge decant water. The filter backwash wastewater flows into settling basins where the solids in the filter backwash settle

~~out. Clarifiers may also be used to remove solids from filter backwash in place of, or in addition, to settling basins. The water used to spray wash and from backflushing the filter (together referred to as “filter backwash” or “filter backwash wastewater”) flow into settling basins where the solids in the filter backwash settle out. Clarifiers may also be used to remove solids from filter backwash in place of, or in addition, to settling basins.~~

II. FINDINGS AND III. DISCHARGE PROHIBITIONS

Comment 4 (SFPUC and NCRWAP): *The commenters noted that Prohibition III.C² appears to conflict with Finding II.C, which states that the tentative order is not intended to implement State law. On the same issue, the commenters requested removal of Fact Sheet section IV.A.1.d, which references Prohibition III.C.*

Response to Comment 4: We disagree. The finding is correct, and no part of the tentative order is intended to implement State law only. That said, Prohibition III.C is unnecessary because it is somewhat redundant. Thus, we have removed Prohibition III.C and Fact Sheet section IV.A.1.d.

For clarity, we have inserted the following into Fact Sheet section IV.D.2.a to explain this change:

2. Antidegradation. This Order is

- a. ~~**Four**~~ **Three Prohibitions Not Retained** - The previous order specified six prohibitions, and this Order specifies only two ~~three~~ prohibitions from the previous order. ~~The Four of the~~ three previous order's prohibitions are not necessary either because (1) ~~the discharge is no longer covered under this Order because of its narrower scope relative to the previous order or~~ (2) ~~the discharge is prohibited through other authority~~. The following summarizes the basis for not retaining the ~~four~~ three prohibitions:
 - i.
 - iv. Prohibition on causing a condition of pollution, contamination, or nuisance is unnecessary because the receiving water limitations adequately address the prohibition.

Comment 5 (NCRWAP): *The commenter requested revision of Discharge Prohibition III.B to include the bypass exceptions allowed under Attachment D, sections I.G.2 and 3.*

Response to Comment 5: We agree. We have revised Discharge Prohibition III.B for consistency with federal regulations, as shown below:

III. Discharge Prohibitions

A.

B. Bypassing settling basins or clarifiers, as identified in the NOI, is prohibited except as provided for in Attachment D section I.G.

² This prohibition states, “The discharge shall not cause a condition of pollution, contamination, or nuisance as defined in California Water Code section 13050.”

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Comment 6 (Napa): *The commenter stated that effluent limitations should backslide to the drinking water standards (i.e., the Detection Limits for Purposes of Reporting, or DLRs, in Title 22), as currently required for all drinking water treatment plants.*

Response to Comment 6: We disagree. As explained in the Fact Sheet, 40 C.F.R. section 122.44(l) provides that a permit may not contain less stringent requirements than the previous permit. This federal requirement does not allow for backsliding of the limits to those in a whole new other permit. Further, the drinking water standards establish minimum standards to protect tap water for public health, not for aquatic life. Finally, as explained in response to Comment 1, the requirements in the Statewide General Permit for drinking water discharges do not apply to the tentative order for filter backwash discharges.

Comment 7 (SFPUC, Napa, CWSC and NCRWAP): *The commenters requested the elimination of, or changes to, the effluent limitations, as outlined below:*

- **Calculation of Monthly Averages.** *One commenter voiced concerns about the calculation of the monthly average when the laboratory reports results as not detected.*
- **Acute Toxicity.** *Three commenters requested the removal of limits for acute toxicity. SFPUC commented that high doses of polymer might have contributed to acute toxicity during the final adjustments to their system upgrade.*
- **Turbidity in Place of Total Suspended Solids (TSS) and Settleable Matter.** *One commenter proposed to replace TSS and settleable matter monitoring with turbidity monitoring.*
- **Chlorine Residual.** *All four commenters requested changes to the chlorine residual effluent limit (e.g., replace the 0.0 mg/L limit with 0.019 or 0.1 mg/L) or monitoring requirements.*
- **Total Suspended Solids (TSS).** *Three commenters requested removal of effluent limits for TSS. One commenter requested using the TSS limits from Santa Ana Region's Order R8-2015-004. SFPUC requested narrative limits for TSS.*
- **Settleable Matter (SS).** *Three commenters requested removal of effluent limits for settleable matter. One commenter requested an increase to this limit based on footnote "e" of Table 4-2 in the Basin Plan. One commenter requested removal of settleable matter effluent limits due to the quality of its filter backwash discharge water and compliance with the Safe Drinking Water Act for its source water. One commenter stated that the filter backwash process determines treatment effectiveness, and monitoring for settleable matter does not determine effectiveness.*
- **Justification of TSS and SS.** *Three commenters found insufficient justification for total suspended solids and settleable matter effluent limitations. SFPUC requested that best conventional pollutant control technology (BCT) be developed for total suspended solids and settleable matter. NCRWAP requested BCT be developed for total suspended solids and best available technology economically achievable (BAT) for settleable matter.*
- **Copper Effluent Limits.** *Three commenters requested removal or changes to the copper effluent limits, such as developing individual dilution as is currently provided for in EPA's*

offshore oil platform general permit, or making the copper effluent limits applicable to only selected dischargers.

Response to Comment 7: The tentative order includes effluent limits that are in accordance with the SIP and the Basin Plan for the protection of the beneficial uses of receiving water. We have provided our responses to specific comments on the effluent limits, as outlined below:

- a. **Calculation of Monthly Averages.** For calculating monthly averages when the laboratory results contain non-detect values, the discharger must follow Compliance Determination section VI.B.5.b (Attachment E).
- b. **Acute Toxicity.** We disagree with the request to remove the effluent limit for acute toxicity. The filter backwash process concentrates pollutants that could be toxic to fish. Furthermore, some chemicals used in the water treatment or filter backwash process are toxic to fish (e.g., polymers and coagulants). Therefore, the acute toxicity limit is necessary to ensure that dischargers properly operate their system to avoid discharges that kill fish.
- c. **Replacing TSS and Settleable Matter with Turbidity Monitoring.** We disagree. Using turbidity as a surrogate for either or both TSS and settleable matter is unjustified because each required parameter represents a different type of solid in the discharge (i.e., suspended solids versus the fraction of solids that will settle in a given period). Further, dischargers must monitor and report TSS and settleable matter to determine compliance and efficacy of treatment.
- d. **Total Chlorine Residual.** We disagree with the request to replace the 0.0 mg/L total chlorine residual effluent limit with 0.1 mg/L. As explained in Attachment F (Fact Sheet section IV.B.2.a.iii), the 0.0 limit is retained from the previous order and reflects Basin Plan Table 4-2 requirements. However, for clarity, we agree with the request to add parts of the text from Attachment E as a new footnote in Table 2, as shown below:
 - ^[1] A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be considered out of compliance with the chlorine effluent limitation.
- e. **TSS.** We disagree with the request to eliminate the TSS limits, or make them consistent with Santa Ana’s effluent limit, or making them narrative. Doing either would be inconsistent with Table 4-2 of our Region’s Basin Plan. As explained in Attachment F (Fact Sheet section IV.B.2.a.i), “elevated levels of suspended solids in filter backwash may occur if the backwash is not treated properly” and “[t]he suspended solids limitations are based on Basin Plan Table 4-2.” The TSS limits are necessary to ensure that a facility adequately removes suspended solids before discharge.

While it is correct that the Statewide General Permit specifies only narrative best management practice requirements for sediment and solids control, the discharges to be covered by the tentative order are very different than those under the Statewide General Permit. The tentative order’s filter backwash discharges will be routine and would occur only at fixed locations. This means they can be controlled and treated, unlike the Statewide General Permit discharges which are unplanned and/or at remote locations. Moreover, in 1987 the U.S. EPA released a “Model Permit Package – Water Supply Industry,” which included an extensive review of water treatment plant existing permits. This model permit included BPT and BCT analysis, and proposed the following limits:

Monthly average TSS 30 mg/L
Daily maximum TSS 45 mg/L

Thus, the application of the Basin Plan Table 4-2 technology based limits is appropriate and reasonable for filter backwash discharges.

- f. **Settleable Matter.** We disagree with the request to change effluent limits for settleable matter. Concerning footnote “e” of Table 4-2 in the Basin Plan, this footnote applies to erosion and sediment control structures, and therefore it is not applicable to treated filter backwash water. See also response concerning the appropriateness of the TSS limits, above.
- g. **Justification of TSS and SS.** In regards to the request to develop the BCT for TSS and settleable matter, we have made the following clarification to the Fact Sheet, just after section IV.B.1.d:

B. Technology-Based Effluent Limits

1. Scope and Authority

...
d. . . .

The CWA requires U.S. EPA to develop effluent limitations, guidelines, and standards representing application of BPT, BAT, BCT, and 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 U.S. EPA has not promulgated effluent limitations, guidelines, and standards. When best professional judgment is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3. No BCT and BAT need to be developed for total suspended solids and settleable matter because Basin Plan Table 4-2 sets the total suspended solids and settleable matter limits as the technology standard in the region for treatment facilities whose primary purpose is to control solids consistent with federal requirements.

- h. **Copper (dilution factor).** We disagree with the request to eliminate the effluent limits for copper. As explained in Attachment F (Fact Sheet section IV.C.3.d), copper demonstrates reasonable potential to adversely impact the beneficial use(s) of the receiving water(s). Concerning Napa’s comment to wait for the copper investigation to be completed, as shown in response to comment 36, the investigation has been completed, and the copper violations have been confirmed.

Concerning NCRWAP’s comment on why copper limits shall be applicable to all dischargers when it should only be applicable to SFPUC, we disagree to customize this limit for only one facility. This general permit may be applicable to other facilities with similar discharges. Because SFPUC’s system is not unique, other future dischargers could obtain coverage for copper that is above the criterion. However, we agree to provide flexibility for those discharges do not have copper at levels of concern. See new footnote 2 in Table 2 shown below in the next subsection.

- i. In regard to SFPUC’s comment requesting a dilution credit provision, we agree to add a dilution credit provision reflected in a new footnote 4 in Table 2, a new Provision VI.E, and a new section VI.E in the Fact Sheet as shown below:

Table 2. Filter Backwash Discharge Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum
Total Suspended Solids (TSS)	mg/L	---	45	30	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---
Total Chlorine Residual ^[1]	mg/L	---	---	---	0.0
Copper ^{[2],[3],[4]}	µg/L	8.6		4.3	
Whole Effluent Acute Toxicity	% Survival	††[5]			

Abbreviations:

mg/L = milligrams per liter

µg/L = microgram per liter

Footnotes for Table 2:

- ^[1] A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be considered out of compliance with the chlorine effluent limitation.
- ^[2] Copper limits are applicable unless representative data of the discharge provided in the NOI for coverage under this Order demonstrates the discharge copper concentration is less than 6 µg/L. If the Executive Officer concurs, then the Executive Officer will indicate that copper limits are not applicable in the authorization to discharge or an amended authorization.
- ^[3] If the Discharger demonstrates that it qualifies for intake water credits, then the Discharger shall comply with the Intake Water Based Limitations for copper in Provision VI.D rather than the water quality based limitations in Table 2. The Executive Officer will determine if the Discharger qualifies in the authorization to discharge or an amended authorization, based on the Discharger’s documentation in its NOI, or a supplemental to the NOI, that it meets all the conditions in Provision VI.D.1.
- ^[4] If the Discharger demonstrates that it qualifies for dilution credits, then the Discharger shall comply with the Dilution-Based Limitations for copper in Provision VI.E rather than the water quality-based limitations in Table 2. The Executive Officer will determine if the Discharger qualifies in the authorization to discharge or an amended authorization, based on the Discharger’s documentation in its NOI, or a supplemental to the NOI, that it meets all the conditions in Provision VI.E.1.
- ^[5] Compliance with the acute toxicity limit shall be achieved in accordance with Section IV of the attached MRP (Attachment E). Representative samples of the effluent shall meet the following limits for acute toxicity.
 - a. The survival of bioassay test organisms in 96-hour static renewal bioassays of undiluted effluent shall be:
 - i. a 3-sample median value of not less than 90 percent survival; and
 - ii. a single-sample maximum of not less than 70 percent survival.
 - b. These acute toxicity limits are further defined as follows:
 - i. 3-sample median limit: 3-sample median is defined as follows: if one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.
 - ii. Single-sample maximum: Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

New Provision VI.E is shown below:

Dilution-Based Limitations

1. Conditions to Qualify

- a. The maximum observed copper ambient background concentration is less than 6 µg/L.
- b. The NOI application shall in detail describe the method by which the Discharger’s proposed mixing zone was derived, the dilution credit calculated, and the point(s) in the receiving water where the applicable criteria/objectives will be met. The NOI application shall include, to the extent feasible, a mixing zone study.
- c. The mixing zone justification shall demonstrate that the proposed mixing zone is as small as practicable and meets all of the following:
 - i. Does not compromise the integrity of the entire water body.
 - ii. Does not cause acutely toxic conditions to aquatic life passing through the mixing zone.
 - iii. Does not restrict the passage of aquatic life.

- iv. Does not adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws.
- v. Does not produce undesirable or nuisance aquatic life.
- vi. Does not produce objectionable color, odor, taste, or turbidity.
- vii. Does not cause objectionable bottom deposits.
- viii. Does not dominate the receiving water body or overlap a mixing zone from different outfalls.
- ix. Does not exceed the applicable public health goal for copper in drinking water (currently 1,300 µg/L).

2. Copper Limitations Based on Dilution Credit

- a. If the Discharger demonstrates, to the satisfaction of the Executive Officer, that its discharge meets all the conditions in subsection E.1, above, and justifies one of the dilution credits listed below, then the Authorization to Discharge will specify the copper effluent limitations that apply from one of the following:

<u>Copper Limitations based on Dilution Credit</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>
<u>Demonstrated dilution ≥ 2</u>	<u>µg/L</u>	<u>12.0</u>	<u>24.1</u>
<u>Demonstrated dilution ≥ 5</u>	<u>µg/L</u>	<u>23.5</u>	<u>47.1</u>
<u>Demonstrated dilution ≥ 9</u>	<u>µg/L</u>	<u>38.8</u>	<u>77.9</u>
<u>Demonstrated dilution ≥ 15</u>	<u>µg/L</u>	<u>61.8</u>	<u>124</u>

Changes to section IV.C.4.a, Table F-4 and VI.E of the Fact Sheet are shown below:

Rationale For Effluent Limitations and Discharge Specifications

...

C. Water Quality-Based Effluent Limitations

...

4. WQBELs Calculations

- a. Copper. The following table shows the WQBEL calculations for copper. These WQBELs were developed in accordance with the procedures specified in SIP section 1.4. ~~This Order assumes minimal dilution is available for discharges; therefore, no dilution credit is granted in calculating these WQBELs.~~

The allowance for intake credit-based and dilution credit-based limitations are based on the SIP sections 1.4.4 and 1.4.2. Compliance with these alternate limits is provided in Provisions VI.D and E of the Order with rationale in the corresponding section of this Fact Sheet.

Table F-4. WQBEL Calculations

<u>Pollutant</u>	<u>Copper D=0</u>	<u>Copper D=2</u>	<u>Copper D=5</u>	<u>Copper D=9</u>	<u>Copper D=15</u>
<u>Units</u>	<u>µg/L</u>	<u>µg/L</u>	<u>µg/L</u>	<u>µg/L</u>	<u>µg/L</u>
<u>Basis and criteria type</u>	<u>Basin Plan Freshwater Quality Objective</u>				
<u>Criteria –Acute</u>	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>

Pollutant	Copper	Copper	Copper	Copper	Copper
	D=0	D=2	D=5	D=9	D=15
Criteria –Chronic	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>
SSO Criteria –Acute	-----	-----	-----	-----	-----
SSO Criteria –Chronic	-----	-----	-----	-----	-----
Water effects ratio (WER)	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Lowest WQO	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>
Site specific translator - MDEL	-----	-----	-----	-----	-----
Site specific translator - AMEL	-----	-----	-----	-----	-----
Dilution factor (D) (if applicable)	<u>0.0</u>	<u>2.0</u>	<u>5.0</u>	<u>9.0</u>	<u>15.0</u>
No. of samples per month	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>
Aquatic life criteria analysis required? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>
HH criteria analysis required? (Y/N)	<u>N</u>	<u>N</u>	<u>N</u>	<u>N</u>	<u>N</u>
Applicable Acute WQO	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>	<u>8.7</u>
Applicable Chronic WQO	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>
HH criteria	<u>1300</u>	<u>1300</u>	<u>1300</u>	<u>1300</u>	<u>1300</u>
Background (Maximum concentration for aquatic life calculation)	<u>0.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>
Background (Average concentration for human health calculation)	<u>0.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>
Is the pollutant on the 303(d) list and bioaccumulative (Y/N)?	<u>N</u>	<u>N</u>	<u>N</u>	<u>N</u>	<u>N</u>
ECA acute	<u>8.7</u>	<u>24.1</u>	<u>47.2</u>	<u>78.0</u>	<u>124.2</u>
ECA chronic	<u>6.0</u>	<u>16.0</u>	<u>31.0</u>	<u>51.0</u>	<u>81.0</u>
ECA human health	<u>1300.0</u>	<u>1300.0</u>	<u>1300.0</u>	<u>1300.0</u>	<u>1300.0</u>
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>
Average of effluent data points	-----	-----	-----	-----	-----
Standard deviation of effluent data points	-----	-----	-----	-----	-----
CV (calculated)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
CV (selected)	<u>0.6</u>	<u>0.6</u>	<u>0.6</u>	<u>0.6</u>	<u>0.6</u>
ECA acute mult99	<u>0.321</u>	<u>0.321</u>	<u>0.321</u>	<u>0.321</u>	<u>0.321</u>
ECA chronic mult99	<u>0.527</u>	<u>0.527</u>	<u>0.527</u>	<u>0.527</u>	<u>0.527</u>
LTA acute	<u>2.8</u>	<u>7.7</u>	<u>15.2</u>	<u>25.0</u>	<u>39.9</u>
LTA chronic	<u>3.2</u>	<u>8.4</u>	<u>16.3</u>	<u>26.9</u>	<u>42.7</u>
minimum of LTAs	<u>2.8</u>	<u>7.7</u>	<u>15.2</u>	<u>25.0</u>	<u>39.9</u>
AMEL mult95	<u>1.55</u>	<u>1.55</u>	<u>1.55</u>	<u>1.55</u>	<u>1.55</u>
MDEL mult99	<u>3.11</u>	<u>3.11</u>	<u>3.11</u>	<u>3.11</u>	<u>3.11</u>
AMEL (aq life)	<u>4.3</u>	<u>12.0</u>	<u>23.5</u>	<u>38.8</u>	<u>61.8</u>
MDEL(aq life)	<u>8.7</u>	<u>24.1</u>	<u>47.1</u>	<u>77.9</u>	<u>124.0</u>
MDEL/AMEL Multiplier	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
AMEL (human hlth)	<u>1300</u>	<u>1300</u>	<u>1300</u>	<u>1300</u>	<u>1300</u>
MDEL (human hlth)	-----	-----	-----	-----	-----
minimum of AMEL for Aq. life vs HH	<u>4.3</u>	<u>12.0</u>	<u>23.5</u>	<u>38.8</u>	<u>61.8</u>
minimum of MDEL for Aq. Life vs HH	<u>8.7</u>	<u>24.1</u>	<u>47.1</u>	<u>77.9</u>	<u>124.0</u>
Previous order AMEL	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Previous order MDEL	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Final limit – AMEL	<u>4.3</u>	<u>12.0</u>	<u>23.5</u>	<u>38.8</u>	<u>61.8</u>
Final limit – MDEL	<u>8.7</u>	<u>24.1</u>	<u>47.1</u>	<u>77.9</u>	<u>124.0</u>

VI. RATIONALE FOR PROVISIONS

....

E. Dilution Credit-Based Limitations

SIP section 1.4.2 provide that the Regional Water Board may consider mixing zones, dilution credits, and ambient background concentration, of a priority pollutant in the receiving water body on a pollutant-by-pollutant basis and on a discharge-by-discharge or water body-by water body basis when establishing WQBELs if a discharger demonstrates certain conditions are met.

SFPUC requested that the Regional Water Board consider allowance of dilution credits in this Order. As explained in section VI.D above, this facility does not add copper but provides a net reduction in copper loading.

Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the dilution credit based limits. There is no need for any adjustment due to TMDLs because TMDLs are not anticipated, or needed, to be established for the water bodies covered by this Order. Additionally, the dilution credit-based limits will be pre-established in the authorization to discharge so as to provide clarity with which limitations (Table 2 or Provision VI.E) a discharger must comply. Conservative assumption using the maximum observed background concentration will ensure that limitations are protective for all potential discharges. Moreover, the limitations, calculated as shown in Table F-4, are based on pre-selected dilution credits that encompass a reasonable range achievable and that the Regional Water Board has granted to other inland surface water dischargers.

A discharger also has the option of seeking applicability after its original NOI and withdrawing applicability all together, but both must be approved in an authorization or amended authorization to discharge from the Executive Officer.

Comment 8 (SFPUC and NCRWAP): *In Provision VI.D.1.b, the commenters requested insertion of the following paragraph: “The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body. In the case of reservoirs, lakes, or other large water bodies, the Discharger may provide facility diagrams or other documentation to demonstrate that the intake water is from the same water body as the receiving water body.”*

Response to Comment 8: We disagree. The suggested paragraph would be redundant. That is, submitting a diagram would be needed for compliance with one of the other already included criteria in this provision (e.g., Provision VI.D.1.b.ii).

V. RECEIVING WATER LIMITATIONS

Comment 9 (NCRWAP): *In section V.A.6 of the tentative order (Receiving Water Limitations), insert the following underlined text after the temperature limitation: “Alteration of temperature beyond present natural background levels that cause nuisance or adversely affect beneficial uses.”*

Response to Comment 9: We disagree. The requested insertion is not consistent with our Basin Plan section 3.3.17, which states in part the following:

The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.

VI. PROVISIONS

Comment 10 (SFPUC, Napa, CWSC, and NCRWAP): *Remove the requirements for the three required plans (Wastewater Facilities Review and Evaluation and Status Report [Provision VI.3.a], the Operations and Maintenance Manual Review and Status Report [Provision VI.3.], or the Best Management Practices Plan [Provision VI.4.a]), or consolidate these three plans into a single document.*

Response to Comment 10: We partially agree. We removed the Wastewater Facilities Review plan requirement as it is mostly duplicative of the Operations and Maintenance plan. We disagree with the removal of the other plans because they require that a discharger operates and maintains the treatment system and best management practices such that adequate and reliable treatment occurs. Please note that the tentative order does not prohibit a discharger from combining the plans into one document. Also, we have revised the provisions to clarify that these plans apply only the filter backwash treatment processes that are the subject of the tentative order and not the drinking water treatment facilities. Provision VI.C.3.a has been removed as shown below:

~~a. Wastewater Facilities Review and Evaluation, and Status Reports~~

- ~~i. The Discharger shall operate and maintain facilities that treat filter backwash in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded, as necessary, in order to provide adequate and reliable treatment and disposal of all wastewater.~~
 - ~~ii. The Discharger shall regularly review and evaluate its filter backwash facilities and operational practices in accordance with the paragraph above. The Discharger shall conduct these reviews and evaluations as an ongoing component of the administration of its filter backwash facilities.~~
 - ~~iii. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of filter backwash facilities and operational practices, including any recommended or planned actions and a time schedule for these actions.~~
 - ~~iv. The Discharger shall describe its review and evaluation procedures and applicable filter backwash facility programs or filter backwash related capital improvement projects, in each annual self-monitoring report.~~
-

ATTACHMENT A – DEFINITIONS

Comment 11 (Napa and NCRWAP): *The commenters state that filter backwash discharges are primarily potable water, not wastewater. Further, in the definition of Mixing Zone in Attachment A, the*

commenters request the removal of references to wastewater. Regarding mixing zones, Napa states that Lake Hennessey is not an ephemeral stream with periods of reduced flow volumes.

Response to Comment 11: We disagree. Filter backwash discharge is a waste as defined in Water Code section 13050. Therefore, it is not appropriate to change the definition of mixing zone in Attachment A as it reflects general definitions used throughout the State for the purpose of regulation of waste discharges. We note Napa’s comment that Lake Hennessey is not an ephemeral stream with periods of reduced flow volumes.

Comment 12 (NCRWAP): *The commenter requests clarification to the receiving water limitations to show that discharges will not alter conditions outside the near-field mixing zone. The commenter also stated that section 3.1 of the March 2015 Basin Plan indicates that the water quality objectives cannot be applied at or immediately adjacent to effluent discharge structures. Within the near-field mixing zone, some alteration may occur, albeit in a very small area.*

Response to Comment 12: Revision for clarification is not necessary. See Attachment F, Factsheet, section V and Attachment A – Definitions for “Mixing Zone.”

ATTACHMENTS B AND C – NOTICE OF INTENT FORM AND INSTRUCTIONS

Comment 13 (Napa): *In the Notice of Intent Form (Attachment B) and the Monitoring and Reporting Program (Attachment E), remove “other pollutants” from Tables IV A and IV B (Attachment B) and Table E-3 (Attachment E). Annual (or more frequent) testing of these parameters is already required under the drinking water regulations in Title 22.*

Response to Comment 13: We agree to revise these tables to a limited extent. While chemicals used for drinking water treatment or for backwash water treatment may be at concentrations safe for potable water, these concentrations may be unsafe for aquatic life. Therefore, we agree to change tables IV A and IV B (Attachment B) and Table E-3 (Attachment E) as follows: Other Pollutants (see Fact Sheet Table F-3)

In addition, to further reduce duplicate data reporting, the following text has been added to the instructions for the NOI section IV (Discharge and Receiving Water Quality):

... A discharger who was covered under the previous order and had submitted an NOI for continued coverage under a future to be reissued permit are not required to submit the following data with its NOI for coverage under this Order; however, the Discharger shall submit the following data with its NOI due in 2020 if it plans to seek coverage under a future reissued permit.

Comment 14 (Napa): *In Attachment C section VII.A.1.c (Best Management Practices Plan), remove the requirement to include all Material safety Data Sheets (MSDS).*

Response to Comment 14: We agree to clarify that only MSDS for chemicals used for filter backwash treatment are required. We have changed section VII.A.1.c as follows:

Describe chemical usage for filter backwash treatment, if any, and include a section estimating the residual concentration in the discharge as compared to the no adverse effect level concentration as documented in the ecological section of the applicable Material Safety Data Sheet (MSDS) for every each chemical used for filter backwash treatment. A copy of the MSDS for every each chemicals used for filter backwash treatment is required to be included in the BMP.

Comment 15 (Napa): *The commenter stated that the permit fee should be reduced because the drinking water facility is already paying fees for coverage under the Statewide General Permit. In addition, the new tentative order has a fee increase of greater than 100% over the previous permit.*

Response to Comment 15: Permit fees are determined by the State Water Board and cannot be changed by the Regional Water Board. The permit fee is based on the same criteria as those used in the previous permit. As a way to offset fee increases, the monitoring that would be required by the tentative order has been reduced to a bare minimum from the previous permit.

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

Comment 16 (Napa, CWSC, and NCRWAP): *In the Standard Provisions (Attachment D), remove the reference to Publicly-Owned Treatment Works (Provision VII.B). In addition, remove all references to sewage sludge and disposal in Provisions I.A.2 and IV.A of the same attachment.*

Response to Comment 16: We disagree. The Standard Provisions is a recitation of federal regulations that are applicable to all NPDES permits. Dischargers are required to comply with only the applicable provisions. POTW and sewage sludge Standard Provisions I.A.2 and IV.A are not applicable to discharges of filter backwash water.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Comment 17 (SFPUC, Napa, CWSC, and NCRWAP): *In Attachment E section III.C (effluent monitoring) remove or change the accelerated monitoring frequency from daily to “weekly when practicable.”*

Response to Comment 17: We agree to modify this section. We have added the following sentence to section III.C of Attachment E:

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

A. . .

B. . . .

- C. When a sampling result is above an effluent limitation or outside of the effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to daily until at least two consecutive daily samples demonstrate compliance with the limitation. The Discharger must monitor as frequently as practical, but not less than weekly, and must justify in the monitoring reports, subject to Executive Officer approval, the reason(s) why daily monitoring is impracticable.

Comment 18 (SFPUC and NCRWAP): *In Attachment E section III.D (effluent monitoring), remove the requirement for obtaining effluent grab samples “during periods of daytime maximum flow.” The commenters stated that it is not possible to predict when the maximum flow will occur, and that filter backwashing is automatic and variable. In this regard, discharge flows often fluctuate in an unpredictable manner during the day. Hence, collecting samples during periods of daytime maximum flow may not be feasible at times because the “daytime maximum flow” is not predictable.*

Response to Comment 18: We agree to modify this section as shown below:

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

A. . .

. . . .

- D. Grab samples shall be collected on random days and, to the greatest extent possible, during periods of daytime maximum flow (if flow varies significantly during the day).

Comment 19 (SFPUC, Napa, CWSC, and NCRWAP): *The commenters requested a variety of changes to the effluent monitoring parameters in Table E-2 (Attachment E), as follows:*

- *Remove the effluent monitoring parameters for settleable matter and priority pollutants.*
- *Remove or change the monitoring requirements for chlorine, chromium VI, metals, trihalomethanes, other pollutants, and daily standard observations.*
- *Change the frequency of chlorine monitoring to once a day or once per discharge.*
- *Change the language in footnote 3 of Table E-2 for monitoring chlorine residual.*
- *Change the data collection frequency. One commenter explained their filter backwash discharge is intermittent, and their current data management practice does not accommodate data collection “on the hour.”*
- *Include a footnote with a language that allows discontinuing parameter sampling if the previous 5 year permit monitoring results are below the lowest applicable water quality objective for the exact same water discharge. In this case, grant the discharger a discontinuance of parameter sampling.*
- *Change the effluent monitoring parameters to be consistent with those in the Statewide General Permit for drinking water discharges.*

Response to Comment 19: Our responses to comments about specific parameters are provided below:

Settleable Matter. We disagree with the removal of settleable matter monitoring because this monitoring is needed to determine efficacy of treatment and compliance with the settleable matter effluent limits.

Priority Pollutants. We disagree with the removal of priority pollutant monitoring. Priority pollutant monitoring is necessary and reasonable. The reasonable potential analysis for the tentative order is based on a truncated dataset provided after the 2014 upgrades. Therefore, additional monitoring data are needed for a complete reasonable potential analysis for the next reissuance.

Acute Toxicity. We agree to change the monitoring frequency for acute toxicity, as shown below in footnote 6 of Table E-2.

Chlorine. We agree to modify footnote 3, as shown below in Table E-2-Treated Filter Backwash Monitoring.

Standard Observations. We agree. In Table E-2 and in footnote 7, we removed the daily monitoring of standard observations, as shown below in Table E-2-Treated Filter Backwash Monitoring.

Chromium. We agree to modify the requirements for chromium VI. We show these changes in footnote 4 of Table E-2-Treated Filter Backwash Monitoring and footnote 5 of Table E-3-Receiving Water Monitoring, below.

Metals and other pollutants. We generally agree and have revised the requirement to once during the term of this Order. For mercury, we also agree to remove the requirement for ultra-clean sampling and analytical methods, unless non-ultra clean methods suggest sample or analytical contamination. However, the sampling frequency for copper remains unchanged because it is a limited parameter. These changes are shown below in Table E-2-Treated Filter Backwash Monitoring.

Table E-2. Treated Filter Backwash Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate and Volume ^[1]	MGD/MG	Continuous or daily	1/Day
Total Suspended Solids (TSS) ^[2]	mg/L	Grab	2/Year
Settleable Matter ^[2]	mL/L-hr	Grab	2/Year
Total Chlorine Residual ^[3]	mg/L	Grab	1/4 Hours
Turbidity ^[4]	NTU	Grab	2/Year
pH	standard units	Grab	2/Year
Copper, Total Recoverable ^[4]	µg/L	Grab	1/Quarter
Zinc, Total Recoverable ^[4]	µg/L	Grab	2/Year <u>Once</u>
Mercury, Total Recoverable ^[4, 5]	µg/L	Grab	2/Year <u>Once</u>
Selenium, Total Recoverable ^[4]	µg/L	Grab	2/Year <u>Once</u>
Arsenic, Cadmium, Chromium (VI), Lead, Nickel, Silver ^[4]	µg/L	Grab	2/Year <u>Once</u>
Chloroform	µg/L	Grab	2/Year <u>Once</u>

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dichlorobromomethane	µg/L	Grab	2/Year Once
Chlorodibromomethane	µg/L	Grab	2/Year Once
Bromoform	µg/L	Grab	2/Year Once
Acute Toxicity ^[6]	% survival	Grab	2/Year ^[6]
Standard Observations ^[7]	–	–	1/day
Other Pollutants (see Fact Sheet Table F-3F-6 and other pollutants identified in NOI application) ^[8]	µg/L or other units as applicable	Grab	Once

Abbreviations:

...

Once = once during the term of this Order and completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.

Footnotes:

^[1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:

- a. Daily total flow volume (MG)
- b. Daily discharge duration (hours)
- c. Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
- d. Monthly total flow volume (MG)
- e. Discharge days per month
- f. Monthly average and daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows).

The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.

~~Some discharge points are not equipped with flow meters; flows can be estimated in this case. The Executive Officer may require the Discharger to install flow meters during the permit term.~~

^[2] The Discharger shall accelerate monitoring in accordance with Provision VI.C.4.b.

^[3] The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) and reporting limit (RL) for total residual chlorine. If the Discharger monitors chlorine residual continuously, then the Discharger shall describe any and all excursions of the chlorine limit and corrective measures applied to address excursions in the transmittal letter of self-monitoring reports. However, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on discrete readings from the continuous data every 4 hours on the hour or at the beginning of discharge and then every 4 hours during discharge. The Regional Water Board reserves the right to use all continuous monitoring data for discretionary enforcement. The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that residual dechlorinating agent is present. This monitoring system may be used to prove that anomalous residual chlorine exceedances measured by on-line chlorine analyzers are false positives because it is chemically improbable to have chlorine present in the presence of sodium bisulfite. If Regional Water Board staff finds convincing evidence that chlorine residual exceedances are false positives, the exceedances are not violations of this Order's total chlorine residual limit.

^[4] All metals shall be reported as total recoverable. ~~with the exception of chromium VI.~~ If total chromium concentration exceeds 11 ug/L, then analysis for chromium VI shall also be conducted.

^[5] For mercury monitoring, ~~the Discharger has the option to use U.S. EPA Method 245.1 or 245.7. However, if the Method 245.1 or 245.7 result shows mercury at or greater than the lowest applicable objective (see Table F-3), then the Discharger must re-monitor at least once using the Discharger shall use ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring.~~

^[6] Acute toxicity monitoring shall be performed according to MRP section IV. If there has been no toxicity for the past three consecutive years (i.e., discharge has been in compliance with the acute toxicity limitations), then the Discharger may reduce the toxicity testing frequency to once per year as long as it continues to maintain no toxicity.

^[7] ~~Standard observations include the following:~~

- a. ~~Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter): presence or absence~~
- b. ~~Odor: presence or absence, characterization, source, distance of travel, and wind direction.~~

^[8] ~~Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.~~

Table E-3. Receiving Water Monitoring

Parameter	Units	Sample Type ^[1]	Minimum Sampling Frequency ^[2]
Dissolved Oxygen	mg/L and % saturation	Grab	[3]
Turbidity	NTU	Grab	[3]
Total Suspended Solids (TSS)	mg/L	Grab	[3]
Temperature	°C	Grab	[3]
pH	s.u.	Grab	[3]
Hardness	mg/L as CaCO ₃	Grab	[3]
Arsenic, Cadmium, Copper, Chromium (VI), Lead, Nickel, Selenium, Silver, Zinc ^[5]	ug/L	Grab	[3]
Mercury, Total Recoverable ^[4]	ug/L	Grab	[3]
Chloroform	ug/L	Grab	[3]
Dichlorobromomethane	ug/L	Grab	[3]
Chlorodibromomethane	ug/L	Grab	[3]
Bromoform	ug/L	Grab	[3]
Other Pollutants (see Fact Sheet Table F-3)	µg/L or other units as applicable	Grab or as applicable	[3]

Abbreviations:

- NTU = nephelometric turbidity units
- mg/L = milligrams per liter
- CaCO₃ = calcium carbonate
- °C = degrees Celsius
- ug/L = micrograms per liter
- ppt = parts per trillion

Footnotes:

- [1] Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR 136. For priority pollutants, the methods must meet the lowest MLs specified in SIP Attachment 4, and Table E-5 MLs. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.
- [2] Samples shall be collected from a location not impacted by the discharge.
- [3] The receiving water data must be sufficient to characterize the concentration of each toxic pollutant in the ambient receiving water. The data on the conventional water quality parameters (pH, salinity, and hardness) should also be sufficient to characterize these parameters in the ambient receiving water. The receiving water shall be monitored once during the term of this Order. Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.
- [4] For mercury monitoring, the Discharger has the option to use U.S. EPA Method 245.1 or 245.7. However, if the Method 245.1 or 245.7 result shows mercury at or greater than the lowest applicable objective (see Table F-3), then the Discharge must re-monitor at least once using ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631). The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA 1631) for total mercury monitoring.
- [5] All metals shall be reported as total recoverable. ~~with the exception of chromium VI.~~ If total chromium concentration exceeds 11 ug/L, then analysis for chromium VI shall also be conducted.

Comment 20 (CWSC): *In Table E-2, the commenter requested elimination of pH monitoring of the effluent discharged to surface water.*

Response to Comment 20: We disagree. Effluent pH monitoring is necessary to determine whether discharges could cause violation of the Receiving Water Limitation V.B.1 for pH. This limitation

states “the pH shall not be depressed below 6.5 nor raised above 8.5” and “controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels.”

Comment 21 (CWSC): *The commenter requested clarification regarding sludge monitoring and the Discharge Monitoring Report (DMR) form (see also the Attachment D Standard Provisions section IV.A)*

Response to Comment 21: No revision is necessary. The dischargers are not required to perform sludge monitoring or report sludge monitoring results on the DMR form. For clarification, in Attachment D this is a federal standard provision that is intended to be generally applicable to all facilities. Reporting sludge information on DMR forms is necessary only when sludge monitoring is required. However, sludge monitoring is not required under the tentative order. Therefore, dischargers are not required to report those results on DMR forms.

Comment 22 (CWSC): *In section VI.B.2.iv of the Monitoring and Reporting Program, delete “signed by the laboratory director or other responsible official.”*

Response to Comment 22: We agree to modify section VI.B.2.iv, as shown below:

- iv. Tabulations of required analyses and observations, including parameters, dates, times, monitoring locations, sample types, and test results, method detection limits, MLs, and RLs, which are based on the laboratory report(s) and signed by the laboratory director or other responsible official. In addition, if intake water or dilution credit-based limitations apply, the Discharger shall also include the necessary supporting calculations as an attachment.
-

Comment 23 (NCRWAP): *In section VI.D.3 of the Monitoring and Reporting Program (Violations and Unauthorized Discharges), revise the language to reference Attachment D section V.E.1 (Twenty-Four Hour Reporting).*

Response to Comment 23: We disagree. Attachment E, section VI.D.3, compliments Attachment D section V.E.1 with more specificity in the report contents for reporting violations of permit requirements.

Comment 24 (SFPUC and Napa): *The commenters requested the following:*

- *Change the PCB test method in footnote 4 Table E-5 to match the test method required by the drinking water regulations (i.e., Title 22)*
- *Remove the receiving water monitoring in Table E-3 because this monitoring is already performed under the drinking water regulations*
- *Change the laboratory-reported minimum levels in Tables E-2 and E-5 to match those levels required under the drinking water regulations (i.e., the Detection Limits for Purposes of Reporting, or DLRs, in Title 22)*
- *Change the test methods in Table E-2 to match those required under the drinking water regulations in Title 22.*

Response to Comment 24: We agree in part. For PCB monitoring, we removed the reference to Method 1668C in Table E-5 by changing footnote 4 as shown below:

- ^[4] The Discharger shall use both U.S. EPA Method 608 ~~and U.S. EPA Method 1668C~~ for PCBs monitoring. Compliance with effluent limitations shall be evaluated using U.S. EPA Method 608.

In Table E-3, we agree to change the sampling frequency, as shown in the changes to footnote 3, below:

- ^[3] ... The receiving water shall be monitored once during the term of this Order. Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order. at least annually and for at least the first two years.

However, receiving water monitoring is necessary to evaluate compliance with the receiving water limits and to calculate water quality objectives for the next permit reissuance. Further, we have compared the DLRs under the drinking water regulations in Title 22 to the minimum levels in the SIP, and found that in many instances the DLRs are higher than those required under the SIP. Due to this inconsistency, the tentative order requires that dischargers follow the SIP requirements for minimum levels. For consistency throughout the tentative order, the test methods in Table E-2 must comply with those already specified in the tentative order, not with the drinking water regulations.

Comment 25 (SFPUC, Napa, CWSC, and NCRWAP): *In Table E-3, the commenters requested the removal of the daily monitoring of standard observations in the receiving water.*

Response to Comment 25: We agree as shown below:

Parameter	Units	Sample Type ^[1]	Minimum Sampling Frequency ^[2]
Standard Observations ^[6]	—	—	1/day

^[6] Standard observations include the following

- a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter); presence or absence, source, and size of affected area.
- b. Discoloration and turbidity; description of color, source, and size of affected area.
- c. Odor; presence or absence, characterization, source, distance of travel, and wind direction.
- d. Hydrographic condition; time and height of high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date).
- e. Weather conditions; air temperature, total precipitation during previous five days, and, if there is a meteorological station onsite, total precipitation on day of observation

Comment 26 (SFPUC and Napa): *In section VI.B.2.g of the Monitoring and Reporting program, the commenters requested the removal of requirements for reporting time-series graphs and the identification of trends.*

Response to Comment 26: We agree, and have modified section VI.B.2.g as follows:

- g. ~~Both tabular and graphical summaries of monitoring data. (the Discharger shall identify trends, if any, in pollutant concentrations found in effluent or receiving water samples for the previous year or years.)~~

Comment 27 (SFPUC): *In Table E-4 of the Monitoring and Reporting Program, the commenter requested consistency for the semiannual monitoring frequency by replacing May with January and November with July.*

Response to Comment 27: We agree. We have changed the dates in Table E-4, as shown below:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
...		
2/Year	Closest May <u>January 1</u> or November <u>July 1</u> before or after effective date Authorization to Discharge ^[1]	November 1 through April 30 and May 1 through October 31 <u>January 1 through June 30</u> <u>July 1 through December 31</u>
...		

Comment 28 (Napa): *In Attachment E section III.D, Napa requests modification to the language for grab samples because many drinking water laboratories are unable to complete all required tests in-house, and testing must be coordinated with outside laboratories. Napa requests the following changes “grab samples shall be coordinated with the drinking water facility in accordance with the monitoring period established in Attachment E Table E-4.”*

Response to Comment 28: We disagree. The suggested change is unnecessary because the tentative order does not prohibit nor discourage coordination between different sampling efforts.

Comment 29 (Napa): *In the notes under Table E-2, remove the reference to “continuous” sampling and remove the redundant sentence about estimating the flow. The commenter stated that the “continuous” description is no longer used in the permit.*

Response to Comment 29 (Napa): We agree to remove the redundant sentence but disagree to remove the reference to “continuous.” Some facilities continuously monitor their flow. Table E-2 provides dischargers with the option to monitoring flows continuously or by estimation. We will remove the redundant sentence as shown below:

Footnotes:

- ^[1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:
- g. Daily total flow volume (MG)
 - h. Daily discharge duration (hours)
 - i. Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
 - j. Monthly total flow volume (MG)
 - k. Discharge days per month
 - l. Monthly average and daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows).

The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.

~~Some discharge points are not equipped with flow meters; flows can be estimated in this case. The Executive Officer may require the Discharger to install flow meters during the permit term.~~

Comment 30 (Napa): *For the whole effluent toxicity testing in section IV.F of the Monitoring and Reporting Program, remove the requirement that “The Discharger shall investigate the cause of any mortalities and report its findings in the next self-monitoring report.” Napa stated that many drinking water facilities cannot analyze acute toxicity in house, and therefore must use outside laboratories for analyses.*

Response to Comment 30: We disagree. The obligation to investigate and mitigate the cause of permit violations such as fish mortalities is a federal obligation of all permittees (40 C.F.R. § 122.41(d)). Dischargers can use outside laboratories to investigate fish mortalities if they do not have in-house expertise to do so.

Comment 31 (Napa): *In Table E-3 of the Monitoring and Reporting Program, modify footnote 2. Drinking water treatment facilities already have dedicated sample locations from the original NPDES permit. In addition, Napa requests that the following requirement be removed “samples shall be collected within one foot below the surface of the receiving water body, unless otherwise stipulated...” and replaced with “samples shall be collected from a location not impacted by the discharge.”*

Response to Comment 31: We agree to make the following changes to footnote 2 in Table E-3:

^[2] ~~Samples shall be collected within one foot below the surface of the receiving water body, unless otherwise stipulated, and shall be from a location not impacted by the discharge.~~

Comment 32 (Napa): *In Attachment E section V.B, remove “Receiving water samples shall be collected on days coincident with effluent sampling.” Napa stated that drinking water treatment facilities are already mandated for water quality parameter testing under the Safe Drinking Water Act by the Division of Drinking Water. Therefore, sampling flexibility needs to be available for agencies to collect according to these requirements. In addition, as previously stated, drinking water treatment facilities already have dedicated sampling locations, which they installed under the original NPDES permit. Napa requested replacing section V.B with “Receiving water samples shall be collected on days coincident with effluent sampling, unless previously arranged by the agency according to the Safe Drinking Water Act and State Water Board. Samples shall be collected from a location not impacted by the discharge.”*

Response to Comment 32: We agree to the following changes to section V.B of the monitoring and reporting program:

Receiving water samples shall be collected on days coincident with effluent sampling or as required to meet Title 22 drinking water intake monitoring requirements. When possible, the Discharger should coordinate the Title 22 drinking water intake monitoring to be on the same

day as effluent monitoring of filter backwash discharge. Samples shall be collected ~~within one foot below the surface of the receiving water body, unless otherwise stipulated, and shall be~~ from a location not impacted by the discharge.

Comment 33 (Napa): *For the laboratory reporting limits in Tables E-2 and E-5, maintain consistency with the drinking water regulations in Title 22 for Detection Limits for Purposes of Reporting and the Maximum Contaminant Level.*

Response to Comment 33: We disagree. See also our Response to Comment 24.

Comment 34 (Napa): *In Provision VI.C.2.b of the tentative order, keep the original permit language for the 30-day notification instead of 90-day notification.*

Response to Comment 34: We agree. We have modified Provision VI.C.2.b in the tentative order as follows:

2. Application for General Permit Coverage and Authorization to Discharge

...

b. Facility Modifications. At least ~~30~~⁹⁰ days prior to any significant facility modification (e.g., changing an outfall location), the Discharger proposing the modifications shall submit a modified NOI form....

ATTACHMENT F – FACT SHEET

Comment 35 (Napa): *In the Fact Sheet sections II.B.1 and IV.C.3.b, remove “EIP Jamieson Canyon” and update to read, “Hennessey Water Treatment Plant and associated Lake Hennessey.*

Response to Comment 35: We agree. We have modified the Fact Sheet as shown below:

We have changed Fact Sheet section II.B.1 as follows:

1. This Order covers the discharge from settling basins or clarifiers of treated dechlorinated filter backwash to inland surface waters. At least two dischargers are anticipated to seek coverage under this Order. The dischargers include (1) San Francisco Public Utilities Commission (SFPUC), Harry Tracy Water Treatment Plant and associated San Andreas Reservoir; and (2) the City of Napa (Napa), ~~EIP Jameson Canyon~~ Hennessey Water Treatment Plant and associated Lake Hennessey.”

We have changed Fact Sheet section IV.C.3.b as follows

- b. Effluent Data.** Data from two surface water filter facilities were used to evaluate the need to develop effluent limitations for this Order. SFPUC, which operates the Harry Tracy Water Treatment Plant and San Andreas Reservoir, and Napa, which operates the ~~EIP Jameson Canyon~~ Hennessey Water Treatment Plant and associated Lake Hennessey, submitted effluent monitoring data from the previous order term. Both facilities upgraded their operations in

2014, and, as a result, the data from 2014 and 2015 more accurately reflect current facility operations and discharges. The reasonable potential analysis was conducted using these more representative effluent data.

Comment 36 (Napa): *In Fact Sheet section II.B, if potential copper violations are currently being investigated, then do not include the information in the tentative order. Instead, wait until the investigation is complete. This will prevent unnecessary effluent testing. The goal is to resolve the problem, and the solution is imminent. Further, the copper monitoring frequency is excessive.*

Response to Comment 36: We disagree that quarterly monitoring for copper is excessive. In regards to toxicity and the copper investigations after the tentative order was published, SFPUC completed their investigation and confirmed the copper violations. However, we have updated Fact Sheet section II.E, as shown below:

Under the previous order, dischargers anticipated to be covered under this Order (Napa and SFPUC) had, in total, violated effluent limitations 30 times. Of the 30 effluent limit violations, 2 involved copper, 15 involved dichlorobromomethane, 3 involved pH, 4 involved total residual chlorine, 1 involved total suspended solids, and 5 involved acute toxicity. These violations are not anticipated to be a significant problem under this Order because both Napa and SFPUC upgraded their facilities in 2014. Since the upgrades, 1 toxicity and 2 copper violations were reported. ~~The toxicity violations is currently being investigated and could be were due to final adjustments necessary to polymer dosing from the treatment system upgrade. The copper violations are also being investigated. In a September 14, 2015, report, SFPUC explains copper is not used in any of the water treatment processes and it could be were~~ due to startup activities related to the upgrades or past use of copper sulfate in the reservoir to control algae. In any case, the filter facility and treatment system for filter backwash would remove more copper from the reservoir than is put back into the reservoir. The Regional Water Board completed enforcement actions for 20 of 30 effluent limit violations. The other 10 violations are pending review and resolution.

Comment 37 (Napa): *In the Exception to Shallow Water Discharge Prohibition , which is found in Fact Sheet section IV.A.2, paragraph 2, remove the references to provisions VI.C.3 and VI.C.4 in the tentative order. The plans described in this section are already required under the Safe Drinking Water Act for drinking water treatment plants.*

Response to Comment 37: We agree in part. As shown under our response to Comment 10, we have removed the requirement for the Wastewater Facilities Review and Evaluation and Status Reports. However, Fact Sheet sections VI.C.3 and VI.C.4 are necessary to justify the equivalent protection requirement to qualify for the exception to the Basin Plan shallow water discharge prohibition, which is the subject of Fact Sheet section IV.A.2. Those provisions relate to the treatment of filter backwash water and not to the entire drinking water treatment plant. Thus, there is no relationship between those provisions and the Safe Drinking Water Act.

Comment 38 (Napa): *Concerning receiving water hardness (Attachment F, section IV.C.2.e.), it is inaccurate to establish a geometric mean for water hardness when source water quality from Lake Hennessey and the San Andreas Reservoir are totally dissimilar. Receiving water hardness needs to be*

accurate to the source water in question. There is no scientific basis for calculating a geometric mean between two water sources that have discrete geologic formations and are not hydraulically connected.

Response to Comment 38: We agree that Lake Hennessey and the San Andreas Reservoir are two different receiving waters that are not hydraulically connected. However, we disagree that the geometric mean of all available hardness data should not be used for setting hardness-dependent effluent limit(s) in a general NPDES permit. Use of all available data allows for more practical limits than limits based on a worst-case scenario of only data from the lowest hardness receiving water.

Comment 39 (Napa): *In Fact Sheet Table F-3, Napa commented that the summarized receiving water data does not represent their monitoring data submitted to the Division of Drinking Water for compliance with the drinking water requirements in Title 22. Napa requested a summary of ambient receiving water data used to establish Water Quality-based Effluent Limitations. Napa also requested separate tables for each facility.*

Response to Comment 39: The receiving water data were based on five data sets submitted by Napa and two sets submitted by SFPUC. Table F-3 of the Fact Sheet lists the highest reported ambient concentration from these data sets. None of the ambient receiving water data was used to establish WQBELs. Board staff has provided all of these data to Napa in response to this comment.

Comment 40 (Napa): *In regard to Fact Sheet section IV.C.3 and Table F-3 footnote 3, historical source water data is available and sufficient to prove there are no reasonable potential pollutants, as annually submitted electronically to the State Water Board.*

Response to Comment 40: We disagree. Receiving water, or source water, monitoring data is just one of the triggers for reasonable potential; we note that no pollutant limits were triggered based only on the receiving water data. Further, footnote 3 is a short version of the process explained in Fact Sheet section IV.C.3.a, which explains that there are three triggers in determining reasonable potential:

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

Comment 41 (NCRWAP): *Include historical discharge data from the previous permit term, which is referenced in Fact Sheet section E, Compliance Summary and in Tables F-1 and F-2. The data would further substantiate the de minimis nature of the discharges and their limited potential for impacts on beneficial uses. This information would be valuable for dischargers in assessing the applicable permit requirements.*

Response to Comment 41: We disagree. Inclusion of all historical discharge data would not substantiate the de minimis nature of the discharges; in fact, it would show the opposite. Napa and SFPUC are the most likely to be covered under this permit. Due to violations reported by both Napa and SFPUC, these treatment systems were upgraded in 2014. Therefore, using all the historical data would show a long history of violations, which might not be representative of future discharges from these two facilities.

CORRECTIONS TO TYPOGRAPHICAL ERRORS

Comment 42 (SFPUC and NCRWA): *Correct the typographical errors.*

Response to Comment 42: We agree. We have corrected the typographical errors, as shown below:

Finding II.B: Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through ~~G~~ F are also incorporated into this Order.”

Attachment E, Monitoring and Reporting Program, Tables E-2 and E-3

Parameter	Units	Sample Type ^[1]	Minimum Sampling Frequency ^[2]
Other Pollutants (see Fact Sheet Table F-3 6 and ...	µg/L or other units as applicable	Grab or as applicable	[3]

Attachment E, Monitoring and Reporting Program, section VI.B.4. - RL and MDL Reporting. The Discharger 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. The Discharger may select any analytical methods described in 40 C.F.R. part 136; however, the RLs shall be below applicable water quality objectives (see Fact Sheet Table F-3~~6~~).

Attachment F, Fact Sheet, section III.D. First Paragraph: “In ~~October 2014~~ July 2015, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources.”

Attachment F, Fact Sheet, section VI.D. Third Paragraph: “Subsection 1 of this provision is based on the SIP conditions that must be met to qualify for the intake water credit based limits with the exception of condition ~~(4)~~ (2) of SIP section 1.4.4. Condition ~~(4)~~ (2) requires consistency with any applicable TMDL.”

Attachment F, Fact Sheet, section IV.A.1: “~~e~~-b. Discharge Prohibition III.B. (No bypassing settling basins or clarifiers). This prohibition”

Attachment F, Fact Sheet, section IV.C.3.d. – “Reasonable Potential Analyses. Quantitative reasonable potential analyses were conducted using data from two known facilities that would seek coverage under this Order. The effluent monitoring data were aggregated and the maximum values were used. The MECs and most stringent applicable water quality criteria are presented in the following tables, along with the analysis results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable criteria for all pollutants, and monitoring data are unavailable for others. When additional data become available, further analysis will be conducted to determine whether Water Quality-based Effluent Limitations are necessary. The receiving water monitoring data were also aggregated, and the maximum values were used in the background column in Table F-36.”

Attachment F section IV.B.2.a.i: “Total Suspended Solids. Elevated levels of suspended solids in filter backwash may occur if the backwash is not treated properly. To ensure continued proper treatment, this Order retains the effluent limitations for TSS of an average monthly effluent limit (AMEL) of 30 mg/L and an average weekly effluent limit (AWEL) a ~~maximum~~ daily effluent limit (MDEL) of 45 mg/L from the previous order...”

Attachment F section IV.B.2.a.ii: “Settleable Matter. This Order retains the effluent limitations for settleable matter of an AMEL of 0.1 mL/L/hr and a maximum daily effluent limit (MDEL) of 0.2 mL/L/hr... .”

STAFF-INITIATED REVISIONS

In addition to making minor editorial and formatting corrections, staff corrected a numbering error in Fact Sheet section IV.A.1 by replacing “c” with “b.”