CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION No. R2-2008-0101

CATEGORICAL EXCEPTION TO THE *POLICY FOR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES OF CALIFORNIA* FOR DISCHARGES FROM DRINKING WATER SYSTEMS IN THE SAN FRANCISCO BAY REGION

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter "Regional Water Board"), finds that:

Background

1. In the San Francisco Bay Region, various water service providers discharge wastewater in the process of fulfilling statutory requirements under the federal Safe Drinking Water Act and the California Health and Safety Code.

2. Water service providers also discharge wastewater when they drain water supply reservoirs, canals, pipelines, or water treatment facilities for cleaning or maintenance.

3. In most cases, these discharges flow into inland surface waters, enclosed bays, or estuaries.

4. To the extent that these discharges are not simple water transfers (i.e., an activity that conveys or connects waters of the United States without introducing pollutants or subjecting the transferred water to intervening industrial, municipal, or commercial use [40 CFR 122.3]), they are subject to National Pollutant Discharge Elimination System (hereinafter "NPDES") permit requirements that implement priority pollutant water quality objectives contained in the National Toxics Rule, California Toxics Rule (hereinafter "CTR"), and *San Francisco Bay Basin (Region 2) Water Quality Control Plan* (hereinafter "Basin Plan").

5. The CTR and Basin Plan contain the copper and trihalomethanes water quality objectives presented in Attachment 1.

6. The State Water Resources Control Board adopted the most recent version of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (hereinafter "SIP") in February 2005; the California Office of Administrative Law approved it in May 2006.

7. The SIP establishes provisions to implement CTR and Basin Plan water quality standards for inland surface waters, enclosed bays, and estuaries, including methods for deriving NPDES permit effluent limits for wastewater discharges.

Categorical Exception

8. In many cases, the discharges from the drinking water systems described above cannot readily achieve copper and trihalomethanes effluent limits derived in accordance with the SIP.

9. The SIP allows the Regional Water Board to grant a categorical exception in such circumstances, stating:

> The [Regional Water Board] may, after compliance with the California Environmental Quality Act (CEQA), allow short-term or seasonal exceptions from meeting priority pollutant criteria/objectives if determined necessary to implement control measures…regarding drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code. Such categorical exceptions may also be granted for draining water supply reservoirs, canals, and pipelines for maintenance, for draining municipal storm water conveyances for cleaning and maintenance, or for draining water treatment facilities for cleaning or maintenance.

10. According to the SIP, to grant this exception the Regional Water Board must ensure that each discharger notifies potentially affected public and governmental agencies; describes its proposed action; provides a time schedule, monitoring plan, California Environmental Quality Act (hereinafter "CEQA") documentation, contingency plans, and residual waste disposal plans; identifies an alternate water supply, if needed; and upon completion of the project, provides certification by a qualified biologist that receiving water beneficial uses have been restored.

CEQA Documentation

11. With documentation obtained from several dischargers, the Regional Water Board prepared an Initial Study and Mitigated Negative Declaration (hereinafter "IS/MND") pursuant to CEQA, therein considering the potential environmental impacts of granting an exception to the copper and trihalomethanes water quality objectives in Attachment 1; the IS/MND is Attachment 2.

12. As considered in the IS/MND, the exception relates specifically to drinking-water-related discharges that are short-term or seasonal in nature, meaning that they occur no more than 2,200 hours per year (e.g., a continuous discharges lasting up to 3 months of the year or intermittent discharges lasting up to 6 hours per day all year long).

13. The IS/MND concluded that granting such an exception would have no significant adverse environmental impacts if a mitigation measure was implemented for certain types of discharges; specifically, mitigation would be necessary unless the discharges would (a) contain copper concentrations above water quality criteria no more frequently than once every three years on average or (b) flow back into the same water body where the water originated.

14. The Regional Water Board circulated the IS/MND among potentially interested organizations and individuals for review and comment for 30 days.

15. As a result of the comments received, Regional Water Board staff made minor, non-substantive changes to the IS/MND.

16. The Regional Water Board has considered the IS/MND. Based on the whole record (including the IS/MND and comments received) and the Regional Water Board's independent judgment and analysis, there is no substantial evidence that the project could have a significant effect on the environment.

NOW, THEREFORE BE IT RESOLVED that:

1. The Regional Water Board hereby adopts the IS/MND.

2. The Regional Water Board will grant exceptions from meeting the priority pollutant objectives listed in Attachment 1 when necessary to implement control measures conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code.

3. The Regional Water Board will grant exceptions from meeting the priority pollutant objectives listed in Attachment 1 when necessary to drain water supply reservoirs, canals, pipelines, or water treatment facilities for cleaning or maintenance.

4. The Regional Water Board will grant these exceptions only for "short-term or seasonal discharges," meaning discharges lasting no more than 2,200 hours per year, and those discharges consistent with what was evaluated in the IS/MND.

5. The Regional Water Board will apply these exceptions as appropriate on a permit-by-permit basis.

6. The Regional Water Board will apply these exceptions only when the following SIP conditions are met:

a. The discharger shall notify potentially affected public and governmental agencies.

b. The discharger shall submit a detailed description of the proposed action, including the proposed method of completing the action.

c. The discharger shall submit a time schedule.

d. The discharger shall submit a discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures).

e. The discharger shall submit contingency plans.

f. The discharger shall identify an alternate water supply (if needed).

g. The discharger shall submit residual waste disposal plans.

h. The discharger shall provide certification by a qualified biologist that the receiving water beneficial uses have been restored.

7. Unless a discharge (a) contains copper concentrations above water quality criteria no more frequently than once every three years on average or (b) flows back into the same water body where the water originated, the Regional Water Board will require the following mitigation measure from the IS/MND as a condition for granting an exception:

Mitigation Measure: Dischargers shall prepare and implement pollution minimization plans with the following:

- Best management practices (BMPs) that eliminate planned discharges and minimize unplanned discharges within 48 hours of applying copper-based herbicides to waterbodies;

- BMPs that eliminate or reduce to the extent feasible the use of copper-based herbicides by using less toxic methods for controlling algal blooms and reducing the use of copper-based herbicides to the lowest effective dose;

- Operational BMPs that avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible;

- Inspection and maintenance BMPs that minimize the number of discharges by preventing leaks and breaks from pipelines, valves, tanks, and other drinking water system infrastructure;

- Training BMPs that minimize the frequency of accidental spills; and

- Annual submittal of a report documenting the review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented, and maintained, and providing additional BMPs where necessary to reduce impacts to less-than-significant.

8. Reporting on and monitoring of the above mitigation measure shall be performed by the Regional Water Board as described in Attachment 3.

9. The Regional Water Board may modify or revoke any exception at any time, including but not limited to any such time when evidence suggests an actual or potential significant

environmental impact has been or could be caused by a discharge subject to an exception (e.g., beneficial uses not restored following a discharge).

10. The Regional Water Board may require monitoring and data collection as necessary to reevaluate the appropriateness of granting an exception.

11. This resolution shall not preclude allowing other exceptions, including exceptions for different pollutants, under other circumstances in the future. These additional exceptions may define the term "seasonal or short-term discharge" differently. Any additional exceptions must meet SIP requirements, including compliance with CEQA.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on December 10, 2008.

Digitally signed by Bruce Wolfe
Date: 2008.12.12 15:35:47 -08'00'

BRUCE H. WOLFE
Executive Officer

Attachment 1: Copper and Trihalomethanes Water Quality Objectives
Attachment 2: Initial Study / Mitigated Negative Declaration
Attachment 3: Mitigation Reporting and Monitoring Program

ATTACHMENT 1
Copper and Trihalomethanes Water Quality Objectives

CTR Trihalomethanes Water Quality Objectives

Trihalomethane	Human Health Objective (µg/L) (Consumption of Water and Organisms)
Bromoform	4.3
Chlorodibromomethane	0.41
Chloroform	NA
Dichlorobromomethane	0.56

Notes:
µg/L Micrograms per liter
NA Not Available

Basin Plan Copper Water Quality Objectives

Receiving Water	Aquatic Life Objective (µg/L)	
	Acute (1-Hour Average)	Chronic (4-Day Average)
Freshwater[1]	14	9.3
Salt Water[2]	5.8	3.7
Suisun Bay, San Pablo Bay, Central San Francisco Bay, and portion of Lower San Francisco Bay[3]	9.4	6.0
Portion of Lower San Francisco Bay and South San Francisco Bay[4]	10.8	6.9

Notes:
µg/L Micrograms per liter
1 The freshwater objectives for copper are based on hardness. The table values assume a hardness of 100 milligrams per liter of calcium carbonate ($CaCO_3$). At other hardnesses, the objectives must be calculated using the following formulas where H = ln(hardness): The 4-day average objective for copper is $e^{(0.8545H-1.702)}$. The 1-hour average for copper is $e^{(0.9422H-1.700)}$.
2 Unless site-specific objectives have been adopted, these objectives apply to all marine waters.
3 Site-specific objectives for estuarine waters contiguous with San Francisco Bay north of Hayward Shoals were adopted through Resolution R2-2007-0042. The Regional Water Board approved this resolution on June 13, 2007, the State Water Board approved it on January 15, 2008, and the California Office of Administrative Law approved it on May 12, 2008. These objectives are currently pending U.S. Environmental Protection Agency approval.
4 These site-specific objectives are listed in Basin Plan Table 3-3A for estuarine waters contiguous with San Francisco Bay south of Dumbarton Bridge.

ATTACHMENT 2
Initial Study / Mitigated Negative Declaration

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project title:** Categorical Exception to the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries in California* (SIP) for Discharges from Drinking Water Systems.

2. **Lead agency name and address:**

   San Francisco Bay Regional Water Quality Control Board
   1515 Clay St., Ste. 1400
   Oakland, CA 94612

3. **Contact person and phone number:** Xavier Fernandez
   510-622-2300

4. **Project location:** The project location is the San Francisco Bay Region (Region) of the California Water Quality Control Board. The Region is 4,603 square miles and includes all or major portions of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties.

5. **Project sponsor's name and address:**

   San Francisco Bay Regional Water Quality Control Board
   1515 Clay St., Ste 1400
   Oakland, CA 94612

6. **General plan designation:** Not Applicable

7. **Zoning:** Not Applicable

8. **Description of project:** The San Francisco Bay Regional Water Quality Control Board (Regional Water Board) is proposing to grant a categorical exception to the SIP for drinking water system discharges that are short-term or seasonal in nature and that are conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code. Discharges in this categorical exception also include draining water supply reservoirs, canals, pipelines, or water treatment facilities for cleaning or maintenance.

9. **Surrounding land uses and setting:** The proposed project would affect waterbodies throughout the Region, including the San Francisco Bay-Delta Estuary, drinking water reservoirs, and creeks receiving discharges from drinking water treatment facilities, transmission systems, or distribution systems. The Region includes a mix of residential, commercial, industrial, municipal, agricultural, and open space land uses.

10. **Other public agencies whose approval is required**: None.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least

least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Bruce H. Wolfe — December 12, 2008

Bruce H. Wolfe, Executive Officer — Date

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A. PROJECT DESCRIPTION

I. CATEGORICAL EXCEPTION

The San Francisco Bay Regional Water Quality Control Board (Regional Water Board) is proposing to grant a categorical exception to the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). The categorical exception would be for short-term or seasonal discharges of drinking water. The SIP allows the Regional Water Board to grant such an exception, stating:

> *The [Regional Water Board] may, after compliance with the California Environmental Quality Act (CEQA), allow short-term or seasonal exceptions from meeting priority pollutant criteria/objectives if determined necessary to implement control measures … regarding drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code. Such categorical exceptions may also be granted for draining water supply reservoirs, canals, and pipelines for maintenance, for draining municipal storm water conveyances for cleaning and maintenance, or for draining water treatment facilities for cleaning or maintenance.*

The State Water Resources Control Board (State Water Board) adopted the SIP on March 2, 2000. The SIP establishes provisions implementing priority pollutant criteria promulgated by the U.S. Environmental Protection Agency (USEPA) through the National Toxics Rule (NTR) and California Toxics Rule (CTR), and for priority pollutant objectives established in the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan). The SIP applies to discharges of toxic pollutants into the inland surface waters, enclosed bays and estuaries of California subject to regulation under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and the federal Clean Water Act (CWA).

The proposed categorical exception would only apply to human health and aquatic life water quality objectives (WQOs) for trihalomethanes and copper shown in Tables 1 and 2. Trihalomethanes occur in drinking water as disinfection byproducts. Copper occurs naturally in water; however, the primary anthropogenic source in drinking water is the application of copper-based herbicides to control algal blooms in reservoirs and transmission canals.

Table 1: Trihalomethane Water Quality Objectives

Trihalomethane	Human Health Objective (µg/L) (Consumption of Water and Organisms)
Bromoform	4.3
Chlorodibromomethane	0.41
Chloroform	NA
Dichlorobromomethane	0.56

Notes:
µg/L Micrograms per liter NA Not available

Table 2: Copper Water Quality Objectives

Waterbody	Aquatic Life Objective (µg/L)	
	Acute (1-Hour Average)	Chronic (4-Day Average)
Freshwater[1]	14	9.3
Salt Water[2]	5.8	3.7
Suisun Bay, San Pablo Bay, Central San Francisco Bay, and portion of Lower San Francisco Bay[3]	9.4	6.0
Portion of Lower San Francisco Bay and South San Francisco Bay[4]	10.8	6.9

Notes:

µg/L Micrograms per liter

1 The freshwater objectives for copper are based on hardness. The table values assume a hardness of 100 milligrams per liter of calcium carbonate ($CaCO_3$). At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness). The 4-day average objective for copper is $e^{(0.8545H-1.702)}$. The 1-hour average for copper is $e^{(0.9422H-1.700)}$.

2 Unless site-specific objectives have been adopted, these objectives apply to all marine waters.

3 The Regional Water Board adopted site-specific objectives for estuarine waters contiguous with San Francisco Bay north of Hayward Shoals through Resolution R2-2007-0042 (Regional Water Board 2007a). The Regional Water Board approved this resolution on June 13, 2007; the State Water Board approved it on January 15, 2008; and the California Office of Administrative Law approved it on May 12, 2008. These objectives are currently pending U.S. Environmental Protection Agency approval.

4 These site-specific objectives are listed in Basin Plan Table 3-3A (Regional Water Board 2007b) as site-specific objectives for estuarine waters contiguous with San Francisco Bay south of Dumbarton Bridge.

The proposed categorical exception would only apply to certain types of discharges, specifically discharges from surface water treatment facilities (Treatment Facility Discharges) and discharges from drinking water transmission and distribution systems (Transmission and Distribution System Discharges) as described below. In the San Francisco Bay Region (Region), Treatment Facility Discharges are currently covered by National Pollutant Discharge Elimination System (NPDES) General Permit No. CAG382001, Order No. R2-2003-0062. Transmission and Distribution System Discharges are covered as exemptions in NPDES permits for municipal separate storm sewer systems. None of these permits currently include limits for copper or trihalomethanes in drinking water discharges.

As stipulated in the SIP, the proposed categorical exception would only be granted for short-term or seasonal discharges. For the purposes of this analysis, “short-term or seasonal discharges” are defined as any discharge or combination of discharges occurring continuously or intermittently for no more than 2,200 hours per year. Examples of short-term or seasonal discharges include, but are not limited to, a single

continuous discharge of up to three months or daily discharges of up to 6 hours for an entire year.

The proposed categorical exception would only apply to Treatment Facility Discharges and Transmission and Distribution System Discharges that meet the following criteria:

a) They either (1) contain copper concentrations above water quality criteria no more frequently than once every 3 years on average, or (2) flow back into the reservoir that supplies the water to the facility; or

b) They occur in accordance with mitigation measures identified in this document.

In addition, as stipulated in the SIP, the following would be submitted to the Regional Water Board before an exception would be granted:

a) Time schedule;

b) Contingency plans;

c) Identification of alternate water supply (if needed); and

d) Residual Waste Disposal Plans.

Also in accordance with the SIP, the discharger would be required, upon completion of the discharge, to provide certification by a qualified biologist that receiving water beneficial uses have been restored.

II. TREATMENT FACILITY DISCHARGES

Treatment facilities treat water to control aesthetic problems (taste and odor), pathogens, and chemicals in drinking water. Water treatment processes normally include disinfection to reduce the number of pathogenic microorganisms in water. Chlorine gas, chlorine dioxide, sodium hypochlorite, ozone, and ultraviolet light are common disinfectants. Many treatment facilities add both ammonia and chlorine, either separately or simultaneously, to form chloramines. Chloramines are highly stable and can provide residual disinfecting power throughout a distribution system. Chloramination also produces fewer byproducts, such as chlorophenolic substances (which may cause objectionable taste and odor) and trihalomethanes (which are carcinogens), than free chlorination. To prevent algal blooms from affecting water quality, raw water may also be treated with copper sulfate or other copper-based herbicides in surface water reservoirs or transmission canals before delivery to surface water treatment facilities.

Operation of treatment facilities may result in planned or unplanned discharges. Such discharges can include filter backwash water, storage/settling basin water, treatment overflow, water from line breaks, water from leaks, and water from treatment unit dewatering. To characterize these discharges, Regional Water Board staff reviewed data 31 water treatment facilities operated by 13 drinking water agencies (East Bay Municipal Utilities District [EBMUD] and others 2008).

Each of these discharge types is described below.

1. **Filter backwash water discharge and storage/settling basin discharges:** Filters require periodic backwashing to remove accumulated solids. The backwash frequency depends on the quality of the incoming water and number of hours the filter has been in service. Many facilities recycle backwash water by pumping it into storage/settling basins, then back into the plant influent to be treated with raw water. However, a few facilities do not recycle their backwash water and instead discharge it intermittently or daily. The average daily volume of these planned discharges varies from about 20,000 gallons to 3,600,000 gallons, depending on the number of filters backwashed, the frequency of backwashing, the size of the filter, influent water quality, etc. Of the four facilities known to discharge on a daily basis, two typically discharge less than 800,000 gallons per day, and the other two typically discharge 1,500,000 gallons or more per day. The facility with the lowest volume of daily discharges only operates during the dry season. Two other facilities with daily discharges have up to 7 intermittent discharges per day (maximum duration of about 22 minutes) that return water to the reservoirs that supply water to the facilities. The other facility with daily discharges may discharge for up to 18 hours per day to a creek that drains to a drinking water reservoir (EBMUD and others 2008).

   Other reasons to discharge backwash or storage/settling basin water are operational errors or severe storm events that cause storage/settling basins to overflow. Some facilities divert all their wastewaters, such as backwash water, treatment unit rinse water, treatment unit overflows, and storm water runoff to storage/settling basins. Discharge from storage/settling basins consists of the various wastewaters accumulated in the basins. These unplanned and emergency discharges typically occur about once every 1 to 10 years, depending on the facility. The unplanned discharges generally occur over periods between 2 minutes and 9 hours (EBMUD and others 2008).

2. **Discharges from treatment unit overflow and broken waterlines within the treatment facility:** These are usually non-routine, unplanned discharges resulting from operational or instrument errors that cause one or several treatment units to overflow or drain to surface water either directly or through a storm sewer. The volume of these unplanned discharges varies from as little as 5 gallons up to 2,000,000 gallons depending on the cause and duration of the discharge. Most discharges occur over periods of less than 1 hour, but can occur for up to 24 hours. These unplanned discharges generally occur about once every 1 to 5 years (EBMUD and others 2008).

3. **Leakage water:** Some filters and other water treatment units include sub-drains to collect leaks. Collected leakage is normally diverted to backwash water settling basins and discharged with backwash water. Alternatively, a sub-drain may discharge leakage water directly to a storm sewer that drains into surface waters. In general, these discharges are unplanned and less than 50,000 gallons. The discharges also generally occur less than once every 4 years over periods

between 1 hour and 14 days. However, one facility discharges up to 2,500 gallons each day. This water is generated from the analyzers used to test turbidity and other water quality parameters before the water is distributed to customers (EBMUD and others 2008).

4. **Treatment unit dewatering/drainage water:** Occasionally, treatment units must be taken out of service for maintenance or for a seasonal facility shutdown. In this case, treatment units must be drained or dewatered. Drainage water may be diverted to a storage/settling basin before discharge, or may be discharged directly to surface water. Both maintenance activities and seasonal shut downs can generally be planned well in advance, thus allowing the drainage water to be dechlorinated or dechloraminated and pH adjusted, if necessary, before discharging. Only one facility is known to discharge to treatment unit drainage water to surface waters. Five times per year, this facility drains up to 2,200,000 gallons of treatment unit water back to the reservoir that supplies water to the facility. These discharges can last up to 12 hours (EBMUD and others 2008).

5. **Treatment system flushing water during start-up after facility shut-down:** When a seasonal facility is re-started, the treatment units and piping systems must be flushed. Water from system flushing may be diverted to a storage/settling basin before discharge, or may be discharged directly to surface water. Start ups are planned well in advance, and water flushed from the system is dechlorinated or dechloraminated and pH adjusted, if necessary, before discharging. Seasonal facilities discharge flushing water at least once a year (unless it can be recycled), and one facility discharges flushing water back to its supply reservoir up to 17 times per year. These planned discharges generally occur over periods between 2 hours and 1 day (EBMUD and others 2008).

6. **On-site water storage facility drainage:** Some facilities store treated potable water on-site, either for filter backwashing, later distribution to customers, or both. Occasionally, these water storage facilities require maintenance and need to be drained. The drainage water is sometimes discharged to surface water after being dechlorinated or dechloraminated and pH adjusted, if necessary. The volumes of these planned discharges ranges from less than 6,000 gallons up to 2,000,000 gallons. These planned discharges also generally occur several times per year over periods of a few minutes and up to 1.5 hours (EBMUD and others 2008).

III. Transmission and Distribution System Discharges

Drinking water transmission and distribution systems convey water from the point of origin to agricultural and urban consumers. Transmission systems consist of relatively few large canals, pipelines, tunnels, pump stations, and valve houses that transport water from the point of origin to local water storage reservoirs, treatment facilities and distribution systems. Water delivered to local reservoirs is stored for later delivery to consumers. Except for water from drinking water wells and the San Francisco Public Utilities Commission's (SFPUC's) Hetch Hetchy Reservoir, raw water is typically

delivered to a treatment facility before entering a distribution system for delivery to consumers. Water from drinking water wells and the SFPUC's Hetch Hetchy Reservoir enter directly into distribution systems because the untreated water meets drinking water standards and is disinfected within the transmission and distribution systems. To prevent algal blooms from affecting water quality, raw water may also be treated with copper sulfate or other copper-based herbicides at the point of origin or in canals during transmission.

Distribution systems consist of numerous smaller pipelines, pumps, and valves that deliver treated water to consumers. The water within distribution systems is often fluoridated for dental health, pH adjusted for corrosion control, and chloraminated to provide disinfection within the system and reduce disinfection byproducts, such as trihalomethanes.

The following types of discharges occur from drinking water transmission and distribution systems:

1. **Pipeline/Tunnel/Reservoir drainage for maintenance:** Occasionally, pipelines, tunnels, and reservoirs must be taken out of service for maintenance, including inspections, repairs, and construction upgrades. Maintenance activities can generally be planned in advance, and drainage water is dechlorinated or dechloraminated and pH adjusted, if necessary, before being discharged to storm drains or surface waters. In general, planned maintenance discharges from individual segments of transmission and distribution systems occur about once every 5 to 20 years, depending on factors associated with the pipelines and tunnels, such as age and material composition, and external factors, such as soil conditions. Planned maintenance discharges from individual reservoirs occur up to once every two years on average.

   Maintenance discharges generally occur over periods of less than 1 day to about 2 weeks depending on the size of the segment being drained. Volumes of maintenance discharges range from several thousand gallons up to about 13 million gallons, with the lowest volumes associated with distribution systems and the greatest volumes associated with transmission systems and reservoir discharges (EBMUD 2008; San Francisco Public Utilities Commission [SFPUC] 2008).

2. **Flushing of disinfection water from pipeline during start up:** Pipelines are periodically shut down for maintenance. In addition, some pipelines are shut down during the winter when water demand is relatively low. Before reactivation, the pipelines must be disinfected with hyperchlorinated water. This disinfection water is discharged to storm drains or surface waters to comply with State and Federal drinking water regulations. Reactivating pipelines can be planned in advance, and the disinfection water can be dechlorinated or dechloraminated and pH adjusted, if necessary, prior to discharging. Reactivation of pipelines after seasonal shut down typically results in a discharge once per year. Discharges of disinfection water from reactivating pipeline segments after maintenance occurs

on the same frequency, duration, and volumes as maintenance discharges, and typically occurs within a few weeks of the initial pipeline draining (SFPUC 2008).

3. **Water discharges to reservoirs:** Water discharged from transmission systems to reservoirs are part of general operations and can almost always be planned. These discharges may be of raw or treated water depending on the source of the water and transmission system operation practices. These events are typically seasonal and occur a few times per year. Discharges associated with water transfers usually occur over a period of 3 to 4 weeks and may be as much as 2,000,000,000 gallons. Raw water is often directly discharged to reservoirs. Treated water is dechlorinated or dechloraminated and pH adjusted, if necessary, prior to discharging to reservoirs (SFPUC 2008).

4. **Discharges from pipeline breaks/leaks, valve malfunctions, and other unplanned discharges:** Unplanned discharges occur when pipelines break or leak, valves malfunction, or other unanticipated events occur, such as noncompliance with drinking water standards or a hydraulic release to prevent pipeline rupture. The cause of pipeline breaks and leaks, valve malfunctions, and other unanticipated events is generally equipment failure or operator error; however, in extremely rare instances, a catastrophic event, such as an earthquake, landslide, fire, or other emergency, results in an unplanned discharge. The frequencies of discharges from pipeline breaks/leaks, valve malfunctions, or other unplanned discharges vary depending on location, age of infrastructure, maintenance schedule, and other factors. In general, unplanned discharges at individual locations occur less than every 3 years; however, discharges at a few locations occur about 2 to 3 times per year. The more frequent discharges are typically associated with noncompliance with drinking water standards in transmission system pipelines and generally last less than one day. Volumes of discharges range from several thousand gallons to millions of gallons, depending on the nature of the unplanned discharge. Unplanned discharges are typically not treated until human health and safety are secured at the site (SFPUC 2008).

B. ENVIRONMENTAL ANALYSIS

The CEQA Environmental Checklist and detailed explanations for all the environmental factors are included in Appendix A. Environmental factors requiring more substantial explanations (i.e., those addressing potentially significant adverse environmental effects unless mitigation is incorporated into the project) are provided below. These include biological resources, hydrology and water quality, and issues related to mandatory findings.

I. BIOLOGICAL RESOURCES

The following factor for Biological Resources from the Environmental Checklist (Appendix A) warrants detailed consideration as provided below:

a) **Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Trihalomethanes (THMs) do not pose substantial risks to aquatic organisms at the concentrations anticipated in drinking water discharges. In drinking water, THM concentrations are generally less than 80 micrograms per liter (µg/L) (California Integrated Water Quality System [CIWQS] 2008; SFPUC 2008). Although the Basin Plan and CTR contain no aquatic life water quality objectives (WQOs) for THMs, studies indicate that toxicity to aquatic life occurs at THM concentrations as low as 6,400 µg/L (USEPA 1980). Therefore, the available information indicates that aquatic toxicity from THMs occurs at much higher concentrations than are likely in drinking water discharges.

Unless mitigated, the proposed categorical exception for copper in drinking water discharges could pose risks to special status fish and amphibian species in the Region. Mitigation measures set forth below would ensure that copper-related risks to aquatic organisms, including special status species, would be less-than-significant.

Copper is a naturally occurring trace element generally present in surface waters. Studies of naturally occurring copper concentrations in the Region's creeks are limited, but copper concentrations measured for the Surface Water Ambient Monitoring Program and NPDES permits from relatively unimpacted areas ranged from 0.29 to 2.5 µg/L (Hanson Aggregates 2006; Regional Water Board 2007c,d; Yin 2008). These concentrations were primarily measured during the dry season and are probably lower than maximum concentrations during the wet season, when copper attached to sediment is picked up and carried when rain increases stream flows.

Although copper occurs naturally, the primary anthropogenic source of copper in drinking water is application of copper-based herbicides to control algal blooms that cause taste and odor problems. Copper application is done by both wholesale suppliers, such as the California Department of Water Resources, and local water agencies. In general, application of copper-based herbicides is greatest in the summer, when algal blooms are most prevalent. Copper is applied at concentrations of up to 1,000 µg/L or more.

Copper concentrations in drinking water discharges are expected to range from less than 1 µg/L up to about 380 µg/L. Potential effects of copper on aquatic species, including juvenile salmonids, include mortality, avoidance behavior, condensed growth, decreased sensory perception, and altered metabolism (Eisler 1998; Baldwin and others 2003). The CTR WQOs are intended to protect all aquatic life, including special status species, from these adverse effects. Therefore, allowing an exception to meeting the WQOs for copper could harm aquatic life if not for the considerations that follow.

The CTR WQOs are based on water quality criteria developed in accordance with USEPA guidelines (USEPA 1985a). Criteria based on the guidelines consider data that

meet minimum acceptability requirements, ensure that almost all organisms experience no mortality, and account for effects of acute (i.e. short-term) and chronic (i.e. long-term) exposure. Application of the USEPA guidelines results in two concentration-based criteria to protect aquatic life. One criterion protects aquatic life from effects of acute exposure and the other criterion protects aquatic life from chronic exposure. The acute criterion is a one-hour average not to be exceeded more than once every three years on average, and the chronic criterion is a four-day average not to be exceeded more than once every three years on average. The acute criterion is derived from LC_{50} data (chemical concentrations lethal to 50 percent of a test organism exposed for a given duration) representing numerous species of invertebrates, fish, and other organisms. A computation using these data conservatively estimates a concentration likely to have little or no effect on a wide range of species. The chronic criterion is derived from similar data using ratios between concentrations known to cause acute effects and concentrations known to result in chronic effects.

The CTR and Basin Plan WQOs are based on the 1984 copper criteria (USEPA 1985b) and, for estuarine water in the San Francisco Bay, more recent site-specific data (Regional Water Board 2007a,b). Freshwater criteria depend on the hardness of the receiving water. Copper toxicity is also known to vary with other properties, including temperature, dissolved organic compounds, suspended particles, pH, and various inorganic cations and anions, including those composing alkalinity. As a result, the USEPA updated its copper criteria in 2007 to incorporate these factors using a model to determine copper criteria based on site-specific conditions (USEPA 2007). The WQOs do not reflect this updated approach.

Many of the Treatment Facility Discharges and most of the Transmission and Distribution System Discharges occur less than once every 3 years. In addition, only 21 percent of samples from drinking water facilities exceeded freshwater chronic WQOs (assuming a hardness of 100 mg/L) (CIWQS 2008; EBMUD and others 2008; SFPUC 2008). Therefore, WQOs are not exceeded every time there is a discharge; WQOs are exceeded less often than the frequency of discharges. According to the 1984 and 2007 copper water quality criteria documents for acute and chronic exposures (USEPA 1985b, 2007), aquatic organisms and their uses are not expected to be unacceptably affected from discharges exceeding criteria less than once every 3 years on average. Therefore, the environmental impact would be less-than-significant for discharges that do not exceed copper criteria more than once every 3 years on average.

Regardless of discharge frequency, at least three treatment facilities discharge back to the waterbodies (e.g., reservoirs) that were the initial source of the water. Since the copper originated from these water bodies, these discharges would not change environmental conditions in the reservoirs. Therefore, impacts from discharging water back to these water bodies would be less-than-significant.

The discharges from at least three treatment facilities would exceed water quality criteria more than once every three years and would not flow to reservoirs that were the initial source of copper. For these facilities, mitigation would be required to reduce potential adverse effects to a less-than-significant level.

Mitigation includes modification of operational practices. For instance, monitoring results collected from one reservoir showed that copper concentrations declined from maximum concentrations between 47 and 296 µg/L to concentrations between 5.6 and 42 µg/L within 24 hours of copper-based herbicide applications (EBMUD and others 2008). Therefore, to reduce impacts to aquatic life, treatment facilities drawing from copper-treated water bodies should wait at least 48 hours before discharging to any surface water other than the reservoir from which it draws its water.

Operational practices can also be modified to reduce the use of copper-based herbicides. At least one water district has eliminated the use of copper-based herbicides by using alternative control methods (Ramadan 2008). Another water district has not had to control a major algal bloom with copper-based herbicides for the last 3 years (EBMUD and others 2008). Therefore, impacts from copper in the discharges can be reduced by minimizing the use of copper-based herbicides through integrated pest management that combine less toxic and non-toxic algal control methods with application of copper-based herbicides only when necessary and at the lowest effective dose.

Impacts from copper in discharges can be further reduced by modifying operational practices to reduce the frequency and duration of discharges, thereby avoiding and minimizing discharges. For instance, instead of discharging transmission system water that exceeds Safe Drinking Water Act standards, the water can sometimes be sent to a treatment facility for treatment and then returned to the transmission system. In addition, at least 15 treatment facilities have eliminated planned discharges using operational practices that retain water within the treatment facility. Furthermore, regular inspection and maintenance of treatment facilities and transmission and distribution pipelines can reduce the number of breaks and leaks, and training staff and contractors working at drinking water facilities can reduce accidental spills.

Therefore, unless a discharge (a) contains copper concentrations above water quality criteria no more frequently than once every three years on average or (b) flows back into the same water body where the water originated, the Regional Water Board would require the following mitigation measure as a condition for granting an exception:

Mitigation Measure: Dischargers shall prepare and implement pollution minimization plans with the following:

a) Best management practices (BMPs) that eliminate planned discharges and minimize unplanned discharges within 48 hours of applying copper-based herbicides to reservoirs;

b) BMPs that eliminate or reduce to the extent feasible the use of copper-based herbicides by using less toxic methods for controlling algal blooms and reducing the use of copper-based herbicides to the lowest effective dose;

c) Operational BMPs that avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible;

d) Inspection and maintenance BMPs that minimize the number of discharges by preventing leaks and breaks from pipelines, valves, tanks, and other drinking water system infrastructure;

e) Training BMPs that minimize the frequency of accidental spills; and

f) Annual submittal of a report documenting the review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented, and maintained, and proposing and implementing additional BMPs where necessary to reduce impacts to less-than-significant.

This mitigation measure would reduce impacts from copper in drinking water discharges by reducing the frequency of discharges exceeding water quality criteria sufficiently to ensure that any impacts to aquatic organisms, including special status species, would be less-than-significant. Facilities unable to implement this mitigation measure would not be granted the categorical exception.

II. HYDROLOGY AND WATER QUALITY

The following factors for hydrology and water quality from the Environmental Checklist (Appendix A) warrant detailed consideration as provided below.

a) Would the project violate any water quality standards or waste discharge requirements?

b) Would the project otherwise substantially degrade water quality?

Granting the categorical exception for drinking water discharges from surface water treatment facilities, drinking water transmission systems, and drinking water distribution systems would make inapplicable the objectives for THMs and copper listed in Tables 1 and 2. Since they would no longer apply, the project would not violate these water quality standards.

The potential for concentrations of copper to degrade water quality would be less-than-significant with mitigation. Any potential water quality impacts from copper would relate to aquatic life, and the potential impact of copper on aquatic life is discussed on page 8, and is less-than-significant with mitigation.

The potential for concentrations of THMs to degrade water quality would be less-than-significant. The potential water quality impacts of THMs relate to human health. THMs in water used to supply municipalities pose potential cancer risks. THMs form as disinfection byproducts when chlorine or chloramine reacts with naturally occurring organic matter in water. Chlorine and chloramine are used as disinfectants to comply with Safe Drinking Water Act disinfection requirements. The Safe Drinking Water Act disinfection requirements were promulgated to protect the public from waterborne pathogens.

The CTR contains WQOs for four THMs (Table 1): bromoform, chloroform, chlorodibromomethane, and dichlorobromomethane. These WQOs are more stringent than applicable drinking water standards (Maximum Contaminant Level = 80 µg/L for total THMs [California Code of Regulations, Title 22, Section 64533]), although both the WQOs and drinking water standards are intended to protect human health from the same THMs. This difference occurs because the drinking water standards used risk levels based on factors, such as the health benefits from disinfection of public drinking water, that were not used when developing the CTR WQOs. While the CTR WQOs are intended to ensure that drinking water sources contain water fit for consumption, the drinking water delivered to consumers is allowed to contain higher THM concentrations. The CTR WQOs are particularly over-stringent for short-term and seasonal discharges because these waters mix with other waters and THMs evaporate from surface waters prior to use as drinking water supplies. Additionally, the primary source of exposure to THMs is from drinking water delivered to the home. For decades, drinking water agencies have had no problems meeting protective human health standards for THMs in home-delivered water, and they will likely continue to meet these standards. NPDES permits would continue to protect municipal water supplies by including limits for total THMs based on Basin Plan Table 3-5 WQOs because the exception would not apply to these WQOs. Therefore, granting an exception to the SIP and setting aside CTR WQOs would be unlikely to pose a human health concern and any potential water quality impacts would be less-than-significant.

III. MANDATORY FINDINGS OF SIGNIFICANCE

The following factors for Mandatory Findings of Significance from the Environmental Checklist (Appendix A) warrant detailed consideration as provided below.

a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

b) **Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

c) **Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

Granting the categorical exception would not degrade the quality of the environment. Potential biological impacts are discussed on page 7, and as explained there, they would be less-than-significant with mitigation. In addition, granting the categorical

exception would not involve earthmoving, demolition, or construction, so it would have no impact on important examples of the major periods of California history or prehistory.

Cumulative impacts are the combined impacts of similar projects, but since the proposed project encompasses the entire Region, there are no cumulative impacts beyond those of the project. The impacts of the project are fully considered in Sections B.I and B.II and Appendix A.

Granting the categorical exception would not cause any substantial adverse effects to human beings, either directly or indirectly. Potential human health impacts are discussed on page 11, and as explained there, they would be less-than-significant with mitigation.

C. REFERENCES

Baldwin, D.H., J.F. Sandahl, J.S. Labenia, and N.L. Scholz. 2003. Sublethal Effects of Copper on Coho Salmon: Impacts on Nonoverlapping Receptor Pathways in the Peripheral Olfactory Nervous System. *Environmental Toxicology and Chemistry*, Vol. 22:10.

California Integrated Water Quality System (CIWQS). 2008. Data from self-monitoring reports submitted by East Bay Municipal Utilities District, California Water Service Company, City of Vallejo, San Francisco Public Utilities Commission, North Marin Water District, and Alameda County Water District.

East Bay Municipal Utilities District (EBMUD). 2008. Email communication from John H. Schroeter, Manager of Environmental Compliance, providing information on reservoir discharges.

EBMUD, Santa Clara Valley Water District, Coastside Water District, California Water Sevice Company, Alameda County Water District, San Jose Water Company, San Francisco Public Utilities Commission, Zone 7 Water Agency, City of Benicia, City of Pittsburg, City of Fairfield, City of Vallejo, City of Napa, and City of Calistoga. 2008. Unpublished data submitted in support of their Notices of Intent for coverage under the General National Pollutant Discharge Elimination System (NPDES) Permit for Surface Water Treatment Facilities.

Eisler, R. 1998. *Copper Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review*. U.S. Geological Survey, Biological Resources Division, Biological Science Report USGS/BRD/BSR—1997-0002, Contaminant Hazards Reviews Report No. 33.

Hanson Aggregates. 2006. Priority Pollutant Monitoring Program, Final Report. December 27.

Ramadan, Turan. 2008. Water Operations Supervisor City of Napa, telephone conversation Regional Water Board Staff regarding treatment facility operations. June 11.

San Francisco Public Utilities Commission (SFPUC). 2008. Unpublished data submitted in support of their application for an individual NPDES permit to cover discharges from their Drinking Water Transmission System.

San Francisco Regional Water Quality Control Board (Regional Water Board). 2007a. *Resolution R2-2007-0042 To amend the Water Quality Control Plan for the San Francisco Bay Region to Adopt Site-Specific Objectives for Copper for San Francisco Bay and an Implementation Plan*.

Regional Water Board. 2007b. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*.

Regional Water Board. 2007c. *Water quality monitoring and bioassessment in nine San Francisco Bay Region watersheds: Walker Creek, Lagunitas Creek, San Leandro Creek, Wildcat Creek/San Pablo Creek, Suisun Creek, Arroyo Las Positas, Pescadero Creek/Butano Creek, San Gregorio Creek, and Stevens Creek/Permanente Creek*. Oakland, CA: Surface Water Ambient Monitoring Program, San Francisco Bay Regional Water Quality Control Board.

Regional Water Board. 2007d. *Water Quality Monitoring and Bioassessment in Four San Francisco Bay Region Watersheds in 2003-2004: Kirker Creek, Mt. Diablo Creek, Petaluma River, and San Mateo Creek*. Surface Water Ambient Monitoring Program, San Francisco Bay Regional Water Quality Control Board, Oakland, CA.

U.S. Environmental Protection Agency (USEPA). 1980. Ambient Water Quality Criteria for Halomethanes. Office of Water Regulations and Standards, Criteria and Standards Division, Washington, D.C.

USEPA. 1985a. Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses. Office of Research and Development, Environmental Research Laboratories, Duluth, MN, Narragansett, RI, Corvallis, OR.

USEPA. 1985b. Ambient Water Quality Criteria for Copper – 1984. Office of Water Regulations and Standards, Criteria and Standards Division, Washington, D.C.

USEPA. 2007. Aquatic Life Ambient Freshwater Quality Criteria – Copper, 2007 Revision. Office of Water, Office of Science and Technology, Washington, D.C.

Yin, Tong. 2008. Regional Water Board Case Handler for NPDES permits covering discharges to the Napa River, email communication providing data from the Collaborative Napa River Receiving Water Study.

APPENDIX A: ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☑
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☑
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☑
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☑
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☑
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☐	☑
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☑
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☑
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☑
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☑
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☑
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
f) Otherwise substantially degrade water quality?	☐	☑	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☑
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☑
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☑
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☑
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☑
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
f) Result in inadequate parking capacity?	☐	☐	☐	☑
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☑
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☑
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☑	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

DETAILED EXPLANATIONS

An explanation for each box checked on the environmental checklist is provided below:

I. Aesthetics

a-d) There would be no physical changes to the aesthetic environment resulting from granting the categorical exception. The categorical exception would not affect any scenic vista or resource, or degrade the existing visual character or quality of any site or its surroundings. It would not create any new source of light or glare.

II. Agriculture Resources

a-c) Granting the categorical exception would not cause conversion of farmland to non-agricultural use nor affect agricultural zoning or any Williamson Act contract.

III. Air Quality

a-e) Granting the categorical exception would not generate traffic-related emissions because it would not cause any change in population or employment. It would also not involve construction of any temporary or permanent emissions sources. For these reasons, no change in air emissions would occur, and granting the categorical exception would not conflict with applicable air quality plans, violate any air quality standard, contribute to any air quality violation, contribute to cumulative emissions, or expose sensitive receptors to ongoing pollutant emissions posing health risks.

IV. Biological Resources

a) Granting the categorical exception would not affect any candidate, sensitive, or special status species through habitat modifications because it would not involve earthmoving or construction. It could potentially affect aquatic and amphibious species that are candidate, sensitive, or special status species due to copper exposure. However, mitigation that minimizes concentrations of copper in the discharges, and the frequency and duration of the discharges, would mitigate this potential impact to a less-than-significant level (on page 10).

b) Granting the categorical exception would not result in modification or disturbance to riparian habitat or sensitive natural communities. Therefore, granting the categorical exception would not affect riparian habitats or sensitive communities.

c) Granting the categorical exception would not remove, fill, hydrologically alter, or otherwise degrade state and federally protected wetlands; therefore, it would not have an adverse effect on wetlands protected under the Porter Cologne Act and the Clean Water Act.

d) Granting the categorical exception would not involve landscape modifications, so it would not alter wildlife corridors, remove habitat, or interfere with the movement of any native resident or migratory fish or wildlife species.

e-f) Granting the categorical exception would not conflict with local policies or ordinances, including any applicable habitat conservation plans, natural community conservation plans, or other plans intended to protect biological resources. Therefore, the categorical exception would not conflict with local policies, ordinances, or adopted plans.

V. Cultural Resources

a-d) Granting the categorical exception would not involve any earthmoving, demolition, or construction; therefore, it would not adversely affect any historical, archaeological, or paleontological resource, including human remains.

VI. Geology and Soils

a-d) Granting the categorical exception would not involve the construction of habitable structures; therefore, it would not involve any human safety risks related to fault rupture, seismic ground-shaking, ground failure, or landslides. Granting the categorical exception would not result in soil erosion because it would not involve any earthmoving, demolition, or construction. It would also not create safety or property risks due to unstable or expansive soil.

e) Granting the categorical exception would not require wastewater disposal systems; therefore, it would not require soils capable of supporting the use of septic tanks or alternative wastewater disposal systems.

VII. Hazards and Hazardous Materials

a-b) Granting the categorical exception would not result in any increased transport, use, and disposal of hazardous materials or wastes, and therefore would not increase any potential for accidental releases of hazardous materials or wastes.

c-f) Granting the categorical exception would not result in hazardous materials being handled within 0.25 mile of a school, on a contaminated site included on the Cortese List, or near an airport or airstrip.

g) Granting the categorical exception would not interfere with any emergency response plans or emergency evacuation plans.

h) Granting the categorical exception would not affect the potential for wildland fires.

VIII. Hydrology and Water Quality

a) Granting the categorical exception would not violate waste discharge requirements because it would be incorporated into waste discharge requirements for drinking water facilities. As discussed on page 11, the project also would not violate any water quality standards.

b) Granting the categorical exception would not decrease groundwater supplies or interfere with groundwater recharge.

c-e) Granting the categorical exception would not affect existing drainage patterns or increase the amount of impervious surfaces in any watershed. Therefore, it would not increase the rate or amount of runoff, result in erosion, or exceed the capacity of storm water drainage systems. In addition, the categorical exception would not require any additional water entitlements because it would not induce population growth or development.

f) Granting the categorical exception would not degrade water quality because it would be granted for existing discharges and would not create a new source of

polluted runoff. In addition, mitigation would be required that would reduce impacts to a less-than-significant level (on page 11).

g-j) Granting the categorical exception would not result in housing or structures that would pose or be subject to flood hazards, or construction subject to risks due to inundation by seiche, tsunami, or mudflow.

IX. Land Use and Planning

a-c) Granting the categorical exception would not involve construction; therefore, it would not divide any established community. It would also not conflict with any land use plan, policy, or regulation, and would not conflict with any habitat conservation plan or natural community conservation plan.

X. Mineral Resources

a-b) Granting the categorical exception would not involve excavation or construction; therefore, it would not result in the loss of availability of any known mineral resources.

XI. Noise

a-d) Granting the categorical exception would not generate noise or ground borne vibration; therefore, it could not be inconsistent with local agency standards and would not cause any increase in ambient noise levels.

e-f) Granting the categorical exception would not generate aircraft noise. Therefore, it would not expose people living within an area subject to an airport land use plan or in the vicinity of a private airstrip to noise.

XII. Population and Housing

a-c) Granting the categorical exception would not affect the population of the Region or California. It would not induce growth through such means as constructing new housing or businesses, or by extending roads or infrastructure. Granting the categorical exception would also not displace any existing housing or any people that would need replacement housing.

XIII. Public Services

a) Granting the categorical exception would not affect populations or involve construction. As a result, granting the categorical exception would not affect service ratios, response times, or other performance objectives for any public services, including fire protection, police protection, schools, parks, or other public facilities.

XIV. Recreation

a-b) Granting the categorical exception would not affect the use of existing parks or recreational facilities because it would not affect populations. No recreational facilities would need to be constructed or expanded.

XV. Transportation/Traffic

a-b) Granting the categorical exception would not generate additional motor vehicle trips because it would not increase populations or provide employment. Therefore, granting the categorical exception would not increase traffic in relation to existing conditions. Levels of service would be unchanged.

c) Granting the categorical exception would not affect air traffic.

d) Granting the categorical exception would not result in hazardous design features or incompatible uses because it would not affect any roads or the uses of any roads.

e) Granting the categorical exception would not affect emergency access.

f) Granting the categorical exception would not affect parking demand or supply because it would not increase populations or provide employment.

g) Granting the categorical exception would not conflict with adopted policies, plans, or programs supporting alternative transportation because it would not generate motor vehicle trips.

XVI. Utilities and Service Systems

a) The Regional Water Board would only grant the categorical exception for drinking water discharges. As a result, granting the categorical exception would not relate to the Regional Water Board's wastewater treatment requirements.

b) Granting the categorical exception would not increase water demands or diminish supplies, and would not require the construction of new or expanded water or wastewater treatment facilities.

c) Urban runoff management agencies are unlikely to construct any new or expanded stormwater drainage facilities as a result of granting the categorical exception. The types of discharges subject to the categorical exception have already occurred for some time in the Region and additional Stormwater facilities are unnecessary.

d-e) Because granting the categorical exception would not increase populations or provide employment, it would not require an ongoing water supply. It would also not require ongoing wastewater treatment services.

f-g) Granting the categorical exception would not generate municipal solid waste and would not affect municipal solid waste generation or landfill capacities.

XVII. Mandatory Findings of Significance

a) Granting the categorical exception would not degrade the quality of the environment. Potential biological impacts are discussed on page 12, and as explained, these would be less-than-significant with mitigation. In addition, granting the categorical exception would not involve earthmoving, demolition or construction, so it would have no impact on important examples of the major periods of California history or prehistory.

b) Cumulative impacts are the combined impacts of similar projects, but since the proposed project encompasses the entire Region, there are no cumulative impacts beyond those of the project as mitigated. The impacts of the project are fully considered in the Initial Study.

c) Granting the categorical exception would not cause any substantial adverse effects to human beings, either directly or indirectly. Potential human health impacts are discussed on page 12, and as explained, these would be less-than-significant.

ATTACHMENT 3
Mitigation Reporting and Monitoring Program

Mitigation Measure	Unless a discharge (a) contains copper concentrations above water quality criteria no more frequently than once every three years on average or (b) flows back into the same water body where the water originated, the San Francisco Bay Regional Water Quality Control Board will require the following as a condition for granting an exception: Dischargers shall prepare and implement pollution minimization plans with the following: • Best management practices (BMPs) that eliminate planned discharges and minimize unplanned discharges within 48 hours of applying copper-based herbicides to waterbodies; • BMPs that eliminate or reduce to the extent feasible the use of copper-based herbicides by using less toxic methods for controlling algal blooms and reducing the use of copper-based herbicides to the lowest effective dose; • Operational BMPs that avoid and minimize the number of discharges by retaining water within the drinking water system to the maximum extent possible; • Inspection and maintenance BMPs that minimize the number of discharges by preventing leaks and breaks from pipelines, valves, tanks, and other drinking water system infrastructure; • Training BMPs that minimize the frequency of accidental spills; and • Annual submittal of a report documenting the review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented, and maintained, and providing additional BMPs where necessary to reduce impacts to less-than-significant.
Time of Implementation	During Issuance and Reissuance of National Pollutant Discharge Elimination System (NPDES) Permits and Waste Discharge Requirements (WDRs)
Responsible Entity	San Francisco Bay Regional Water Quality Control Board
Compliance Verification	San Francisco Bay Regional Water Quality Control Board's review and adoption of NPDES Permits and WDRs