## California Regional Water Quality Control Board San Francisco Bay Region

**Proposed Basin Plan Amendment to** 

Correct Errors in Freshwater Metal Water Quality Objectives, Clarify the Basis for Establishing Dilution Credits for Non-Priority Pollutants, and Allow Establishment of Alternative Cyanide Dilution Credits and Mercury Concentration Triggers for Wastewater Treatment Operations



Final Staff Report December 13, 2023

# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION

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Documents are also available at

https://www.waterboards.ca.gov/sanfranciscobay/water\_issues/programs/planningtmdls/amend ments/NPDES\_corrections.html

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## 1 Introduction

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) contains the regulations adopted by the San Francisco Bay Regional Water Quality Control Board (Water Board), and statewide policies, plans, and regulations adopted by the State Water Resources Control Board.

The Water Board regulates surface water and groundwater quality in the San Francisco Bay Region. The region includes the San Francisco Bay segments extending to the mouth of the Sacramento-San Joaquin Delta. It also includes coastal portions of Marin and San Mateo Counties, from Tomales Bay in the north to Pescadero and Butano Creeks in the south.

As the region's master policy document, the Basin Plan includes:

- The beneficial uses of waterbodies in the region (Chapter 2);
- Water quality objectives to protect the beneficial uses (Chapter 3);
- Implementation actions to meet water quality standards (Chapter 4); and
- Water quality attainment strategies, including total maximum daily loads (TMDLs), and time schedules for achieving the water quality objectives (Chapter 7).

The Water Board implements the federal National Pollutant Discharge Elimination System (NPDES) program, which regulates the discharge of pollutants from a point source to waters of the United States by issuing permits. The Water Board issues NPDES permits for wastewater and stormwater. NPDES wastewater permits allow treatment facilities to discharge treated wastewater subject to specified conditions, such as effluent limits, monitoring and reporting requirements, and requirements to perform actions to prevent or in response to a permit condition violation.

This project will amend the Basin Plan primarily to address NPDES wastewater permitting needs. The proposed changes and need for these changes are briefly summarized below:

- 1. Correct errors in freshwater objective calculation formulas for selected metals to be consistent with the California Toxics Rule (CTR) or National Toxics Rule (NTR), from where these objectives originate.
- Clarify that other applicable policies, regulations, and guidance aside from the State Implementation Policy (SIP) may be used when developing dilution credits for non-priority pollutants.
- 3. Allow establishment of alternative cyanide dilution credits and mercury concentration triggers to reflect changes in wastewater treatment operations that implement water recycling projects, water conservation, or use new materials in industrial production process.
- 4. General cleanup to add clarifications, update obsolete information, and improve document formatting.

The specific proposed changes to the Basin Plan are shown in Appendix A. The rationale for these changes is discussed in this report.

This report is organized into sections that present the information and analyses required by State and federal law. Section 2 states the project definition and objectives. Section 3 describes the proposed changes and the rationale for them. Section 4 presents the results of California Environmental Quality Act (CEQA) analyses, and a discussion on the consistency of the proposed amendment with federal and state antidegradation policies.

December 2023

This report meets CEQA requirements for the Water Board's exempt regulatory programs, including the preparation of a checklist (Appendix B) for adopting Basin Plan amendments, and serves in its entirety as a substitute environmental document. The environmental checklist is included as Appendix B.

## 2 **Project Description**

This section provides the definition of and necessity for the proposed project to amend the Basin Plan.

## 2.1 Project Definition

This project is a Basin Plan amendment that makes regulatory and non-regulatory changes to the Basin Plan, as summarized in Table 1 below.

Торіс	Where	What
		Correct errors in water quality objective calculation formulas for chromium (III), copper, lead, nickel, silver, and zinc to include the water-effect ratio and conversion factor, consistent with the CTR and NTR.
Freshwater metal	Table 3-4	Apply all applicable footnotes to cadmium and chromium (III).
objectives		Clarify that cadmium and selenium objectives are expressed as total recoverable metal.
		Update the currently referenced draft U.S. EPA tributyltin criteria document to the final criteria document for tributyltin.
Dilution credits for non-priority pollutants	Section 4.6.1.2	Clarify that other applicable policies, regulations, and guidance aside from the SIP may be used when developing dilution credits for non-priority pollutants (the SIP was developed specifically for the 126 CTR priority pollutants).
Dilution credits for cyanide	Section 4.7.2.2	Allow establishment of alternative dilution credits for cyanide, a priority pollutant, based on SIP procedures.
Mercury concentration triggers	Section 7.2.2.6	Allow establishment of alternative performance-based mercury concentration triggers for municipal and industrial wastewater dischargers.
Non-regulatory updates	Table 3-4	Add clarifications, update obsolete information, and improve document formatting.

Table 1 Summary of Proposed Changes to the Basin Plan

## 2.2 Project Necessity

This project is necessary to amend the Basin Plan to address the following issues:

## 1. Errors in Freshwater Water Quality Objective Calculation Formulas

This revision is necessary to correct the unintentional errors made while incorporating the CTR and NTR criteria into the Basin Plan in 2004, as further discussed in Section 3. These corrections are needed because, as currently written, the water quality objectives are inconsistent with the CTR and NTR and the supporting scientific studies.

## 2. Incomplete Basis for Developing Dilution Credits for Non-Priority Pollutants

Currently, the Basin Plan only identifies the SIP as the guiding policy document that should be used to develop dilution credits for toxic pollutants, including both priority pollutants (e.g., copper, cyanide, mercury) and non-priority pollutants (e.g., chlorine, ammonia, toxicity, tributyltin). However, the SIP was specifically developed to implement the water quality criteria for the 126 priority pollutants listed in the CTR. The proposed clarification is necessary to allow the Water Board to use other applicable policies, regulations, and guidance in addition to the SIP for non-priority pollutants. Sometimes, other regulations and guidance may be more appropriate for non-priority pollutants. For example, the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and State Policy for Water Quality Control: Toxicity Provisions* (State Board, 2020) contain separate regulations related to dilution and toxicity. Moreover, *U.S. EPA's Technical Support Document for Water–Quality Based Toxics Control* (TSD) (U.S. EPA, 1991) provides authoritative guidance for developing dilution credits and effluent limits for non-priority pollutants.

## 3. Water Recycling Limitations by Cyanide Dilution Credits and Mercury Concentration Triggers

Hotter and drier weather in California could diminish our existing water supply by up to 10 percent by 2040 (California Natural Resources Agency, 2022). To help secure our future water supply, water and wastewater agencies must work collaboratively to implement aggressive water recycling projects. In some instances, this includes using reverse osmosis (RO) to produce high-quality recycled water from treated wastewater. RO is a water treatment process that pushes water molecules through a semipermeable membrane to physically remove pollutants from the water. The result is high-quality water on one side of the membrane and a briny concentrate containing the pollutants on the other. In some cases, this RO concentrate is blended back in with the remaining treated wastewater before it is discharged to receiving waters, and although the resulting mass of pollutants discharged does not increase, the pollutant concentrations in the blended discharge are higher. As a result, the water-recycling process and blended discharges can prevent wastewater agencies from meeting NPDES permit requirements based on cyanide dilution credits and mercury concentration triggers currently in the Basin Plan.

Basin Plan <u>Table 4-6</u> includes cyanide dilution credits for 13 specific wastewater discharges. In 2006, the Water Board developed these dilution credits based on the SIP and conditions that existed at that time. In 2008, these dilution credits were incorporated into the Basin Plan. However, as currently written, they may not accommodate important water recycling projects needed now.

Similarly, the Water Board developed the San Francisco Bay Mercury TMDL in 2006 (Water Board, 2006a) and adopted it through amendment of the Basin Plan in 2008. Along with the TMDL's massbased wasteload allocations, the TMDL implementation plan requires municipal wastewater facilities to meet concentration-based triggers. If a trigger is exceeded, dischargers must implement a corrective action plan to, among other things, evaluate their pretreatment performance and methods to avoid future exceedances (see Basin Plan Section 7.2.2.6 – Mercury TMDL Implementation for municipal and industrial wastewater dischargers). At the time of the TMDL adoption, the Water Board did not anticipate that pollutants in treated wastewater might be concentrated as a result of producing recycled water to offset potable water sources.

The proposed amendment will allow the Water Board to develop more feasible requirements that accommodate recycled-water projects while still protecting water quality.

For industrial dischargers, the Water Board may develop alternative cyanide dilution credits and/or mercury triggers when there is material and substantial alteration or addition to the permitted facility, e.g., use of new materials in the production process, which results in the change of types and levels of pollutants in the wastewater to be treated.

## 4. Non-regulatory Updates

This project will also update obsolete information and clarify ambiguities in Table 3-4. Moreover, the Americans with Disabilities Act (ADA) imposes additional requirements on the style and format of documents to be published on government agencies' websites, and this project will address some of these formatting issues.

## 3 Proposed Basin Plan Amendment

This section details the proposed changes to be made to the Basin Plan. The changes are discussed in the order they appear in the Basin Plan. Proposed deletions are shown as strikethrough text, and additions are shown as <u>underlined</u> text. The specific changes are presented in Appendix A.

## 3.1 Correcting Errors in Freshwater Water Quality Objectives

Basin Plan Table 3-4 lists the freshwater water quality objectives for selected toxic pollutants. These objectives are based on U.S. EPA criteria established for California waters, such as the CTR and NTR criteria.

## 3.1.1 Proposed Changes

The following changes are considered regulatory changes:

• Correct the formulas for calculating the objectives for cadmium, chromium (III), copper, lead, nickel, silver, and zinc to include the water-effect ratio and conversion factor (except cadmium). Further explanation of the formula changes is discussed below.

The following changes are considered non-regulatory changes:

- Delete the sentence "The 1-hr. and 4-day objectives = table value × WER" from Footnote "d"; the WER (water-effect ratio) will be moved to individual water quality objective calculation formulas for the noted metals.
- Remove "and other noted metals" in Footnote "e" for cadmium because with the proposed formula corrections, this footnote no longer applies to other noted metals.
- Remove Footnote "b" from cadmium because the cadmium objectives are not based on the CTR; they are based on the 1984 U.S. EPA criteria adopted into the 1986 Basin.

- Apply Footnotes "c" and "d" to chromium (III) because chromium (III) objectives are expressed in the dissolved form (as indicated by Footnote "c"), and the water-effect ratio factor and its relationship with the objectives (as indicated by Footnote "d") also apply to chromium (III).
- Clarify that cadmium and selenium objectives are expressed in the total recoverable form, which otherwise may be confusing, because the objectives for other metals are expressed in the dissolved form (also see the discussion on the objective formula correction below).
- Update Footnote "o" for tributyltin to replace the cited outdated draft U.S. EPA document with the final criteria document U.S. EPA adopted in 2003.

## 3.1.2 Rationale for the Changes

In 2004, the Water Board amended the Basin Plan to incorporate the CTR criteria for copper, lead, nickel, silver, and zinc, and the NTR criteria for chromium (III). The CTR preamble provides the basis for these criteria, which are based on the U.S. EPA water quality criteria documents for these metals and the *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (U.S. EPA, 1985a). The criteria documents for cadmium (U.S. EPA, 1985b), chromium (III) (U.S. EPA, 1985c), lead (U.S. EPA, 1985d), silver (U.S. EPA, 1980), copper, nickel, and zinc (U.S. EPA, 1996a), provide the scientific basis for the NTR and CTR criteria.

Formulas are provided in the footnotes of Table 3-4 of the Basin Plan to calculate the objectives as a function of water hardness. However, parts of these formulas are missing. While the Basin Plan says these objectives are expressed as dissolved metal (Footnote "c" of Table 3-4), the formulas currently presented calculate the metals concentrations in the total recoverable form. The conversion factor that accounts for the fraction of metal that is dissolved versus the total recoverable is missing. These objectives are also a function of the water-effect ratio, which is a measure of the toxicity of a pollutant in site (natural) water divided by the same measure of the toxicity of the same pollutant in laboratory dilution water. This relationship is currently mentioned in Footnote "d," but this Basin Plan amendment will clarify how the water-effect ratio is to be considered. The complete formula for calculating the metals objectives in the dissolved form should be as follows:

Water Quality Objective (1-hour or 4-day average) =  $WER \times CF \times e^{(ln(m \times H) + b)}$ 

where

- WER = water-effect ratio
- CF = conversion factor. Default conversion factors can be found at 40 C.F.R. sections 131.38(b)(2)(iv) (see "Table 2 to paragraph (b)(2)" and "Table 3 to paragraph (b)(2)") and 131.38(b)(2)(v). Site-specific conversion factors may also be calculated per U.S. EPA (U.S. EPA, 1996b) guidance document: *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion.*
- H = In(hardness), where hardness is expressed as mg/L in CaCO<sub>3</sub>
- "m" and "b" = factors for either the acute (m<sub>A</sub>, b<sub>A</sub>) or chronic (m<sub>C</sub>, b<sub>C</sub>) objective calculation. These values are given in 40 C.F.R. section 131.38(b)(2)(iii) ("Table 1 to paragraph (b)(2)").

The cadmium objectives are correctly expressed in the total recoverable form. Their formulas are only revised to include the water-effect ratio for clarity:

Cadmium water quality objective =  $WER \times e^{(ln(m \times H) + b)}$ 

## 3.2 Additional Basis for Developing Dilution Credits for Non-Priority Pollutants

This proposed change would allow the Water Board to use other applicable policies, regulations, and guidance in addition to the SIP when developing dilution credits for non-priority pollutants. This change is considered a regulatory change.

## 3.2.1 Proposed Change

The following <u>underlined text</u> is proposed to be inserted in Section 4.6.1.2.

## "4.6.1.2 Shallow Water Discharges

•••

However, dilution credit may be granted on a discharger-by-discharger and pollutant-by-pollutant basis. <u>Dilution credits for priority pollutants shall be</u> based on provisions of the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California (SIP)." <u>Dilution credits for non-priority pollutants may be based on the SIP or other applicable policies, regulations, or guidance.</u> In making this determination, the Water Board will grant dilution credit on a pollutant-by-pollutant basis if the discharger demonstrates that an aggressive pretreatment and source control program is in place, including the following:

..."

## 3.2.2 Rationale for the Change

The SIP was developed and adopted specifically to implement the water quality criteria for the 126 CTR priority pollutants. For "non-priority pollutants" not listed in the CTR, (e.g., toxicity, ammonia, and tributyltin, to name a few), other policies, regulations, and guidance may be more appropriate. The proposed clarification would allow the Water Board to use applicable policies, regulations, and guidance in addition to the SIP for non-priority pollutants.

## 3.3 Alternative Cyanide Dilution Credits

This proposed change would allow the Water Board to develop alternative cyanide dilution credits that differ from those currently specified in Basin Plan Table 4-6 for 13 shallow water dischargers. This change is considered a regulatory change.

## 3.3.1 Proposed Change

The following <u>underlined text</u> is proposed to be inserted to Section 4.7.2.2:

"4.7.2.2 Cyanide

• • •

Effluent limits for shallow water dischargers that have been granted an exception to Basin Plan Prohibition 1 shall be based on the dilution credits set forth in Table 4-6. <u>Alternatively, effluent</u> <u>limits for these shallow water dischargers may be based on updated dilution credits derived in</u> <u>accordance with the SIP requirements to account for water conservation or water recycling</u> <u>projects.</u> Setting forth dilution credits in Table 4-6 does not authorize discharges into shallow waters. Each discharger must continue to satisfy all requirements for an exception to Basin Plan Prohibition 1.

..."

## 3.3.2 Rationale for the Change

Basin Plan Section 4.7.2.2 sets forth how the region's cyanide site-specific objectives\_are to be implemented. The cyanide site-specific objectives for marine waters are listed in <u>Table 3-3c</u>; dilution credits for certain discharges are provided in Table 4-6. These dilution credits were developed using the SIP procedure and information available prior to 2006, including, but not limited to, receiving water flow, discharge flow, discharge infrastructure characteristics, and discharge quality. This change would allow the Water Board to reconsider these cyanide dilution credits to reflect updated conditions. Because cyanide is a CTR priority pollutant, dilution credits must still be developed in accordance with the SIP.

This change will allow some wastewater agencies to consider water recycling projects. For example, the City of Palo Alto is planning to divert some of its fully treated effluent to a water purification project that Valley Water proposes to construct and operate using reverse osmosis (RO). RO concentrate from the water purification project would be returned and blended with the plant effluent. Although the cyanide in the discharge would be more concentrated, the mass of cyanide discharged would remain the same. This Basin Plan amendment would allow the Water Board to develop new dilution credits that reflect the new circumstances.

## 3.4 Alternative Mercury Concentration Triggers

The proposed change would allow the Water Board staff to develop alternative concentration triggers for the municipal and industrial wastewater treatment facilities in the region. This change is considered a regulatory change.

## 3.4.1 Proposed Change

The following underlined text is proposed to be inserted to Section 7.2.2.6:

"7.2.2.6 Mercury TMDL Implementation

### Municipal Wastewater

...

Effluent mercury trigger concentrations for secondary treatment facilities are a daily maximum of 0.065  $\mu$ g/L total mercury and monthly average of 0.041  $\mu$ g/L total mercury. For advanced treatment facilities, effluent mercury trigger concentrations are a daily maximum of 0.021  $\mu$ g/L total mercury and a monthly average of 0.011  $\mu$ g/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water conservation or water recycling projects.

...

### Industrial Wastewater

... Includes an action plan and time schedule to correct and prevent trigger exceedances. Effluent mercury trigger concentrations are a daily maximum of 0.062  $\mu$ g/L total mercury and monthly average of 0.037  $\mu$ g/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water recycling projects or when there is material and substantial alteration or addition to the permitted facility.

..."

## 3.4.2 Rationale for the Change

The Mercury TMDL, including the wasteload allocations for municipal treatment facilities, petroleum refineries, and industrial treatment facilities, was adopted by the Water Board through a Basin Plan amendment in 2008. The Water Board implements these requirements through the Mercury and PCBs Watershed Permit (currently Order No. R2-2022-0038 (Water Board, 2022), which includes mass-based and concentration-based effluent limits to implement the TMDL's wasteload allocations. To minimize the potential for adverse impacts in the immediate vicinity of the discharges and to that dischargers maintain their ongoing operation, maintenance, and performance, the TMDL also imposes concentration-based trigger is exceeded, the discharger must take actions to avoid future exceedances. Adding the proposed changes will allow the Water Board to update the performance-based mercury concentration triggers for fully treated discharges that may have higher concentrations as a result of water recycling (refer to the Palo Alto example in section 3.3.2 above). The higher triggers would reflect updated conditions without degrading receiving water quality because the mass of mercury discharged would remain the same.

Additionally, some industrial dischargers have converted or are in the process of changing their operations, which will result in effluent quality change. For example, the Tesoro Refinery is converting from processing crude oil to producing biofuel using crop-based oils, rendered fats, and other biological oils (feedstock). Mercury might be lower in the wastewater that goes into the wastewater treatment facility. The proposed changes would allow the Water Board to establish alternative performance-based concentration triggers appropriate for the changes in effluent quality resulting from an industrial process change.

As indicated in Basin Plan <u>Table 7.2.2.1</u>, wastewater discharges contribute less than two percent of the total mercury mass load that enters San Francisco Bay, and this proposed change would not affect implementation of the TMDL wasteload allocations.

## 4 Regulatory Analyses

This section provides the California Environmental Quality Act (CEQA) regulatory analyses. CEQA requires an environmental impact analysis when adopting a Basin Plan amendment under the Water Board's certified regulatory program (California Public Resources Code section 15251(g)). This Staff Report, including the Environmental Checklist and analyses, constitutes a substitute environmental document.

In accordance with Public Resources Code section 21159(a)(3)(c), this section also evaluates economic factors related to the costs of implementing the proposed changes. It also addresses federal and state antidegradation policies and anti-backsliding requirements.

## 4.1 California Environmental Quality Act Analysis

CEQA requires agencies to review the potential adverse environmental impacts of their proposed actions. The water quality control planning process has been certified as an exempt regulatory program by the Secretary of Natural Resources. As such, the Water Board is not required to prepare an environmental impact report or negative declaration for this Basin Plan amendment. Instead, the Water Board must comply with the requirements set forth in California Code of Regulation, Title 23, sections 3775–3781 and prepare substitute environmental documentation. The substitute environmental documentation must include a completed Environmental Checklist and a written report containing (1) a brief description of the proposed activity, (2) an identification of any significant or potentially significant adverse environmental impacts, (3) an analysis of

reasonable alternatives to the proposed activity to avoid or reduce any significant or potentially significant environmental impacts, and (4) an analysis of mitigation measures to avoid or reduce any significant environmental impacts of the proposed activity, and (5) an analysis of the reasonably foreseeable methods of compliance. If the Water Board finds that no fair argument exists that the proposed project or the reasonably foreseeable methods of compliance could result in reasonably foreseeable adverse environmental impacts, the Board should include a finding stating such in lieu of items (3) and (4), and the mitigation and alternatives analyses under item (5) listed above.

Upon completion of the written report, the Water Board is required to provide a Notice of Filing of the report to the public. This Staff Report, including the analysis in this section and the Environmental Checklist in Appendix B, meets the environmental review requirements of CEQA for adopting Basin Plan amendments and serves as the substitute environmental document.

Consistent with California Code of Regulations, Title 23, section 3777(c), the substitute environmental document does not engage in speculation or conjecture and does not provide a site-specific project-level analysis.

## 4.1.1 Project Description

The project is a proposed Basin Plan amendment to make several regulatory and non-regulatory changes to the Basin Plan.

The proposed changes and the objectives of these changes include the following:

- 1. Correct errors in freshwater objective calculation formulas for selected metals to be consistent with the CTR or NTR;
- 2. Clarify that other applicable policies, regulations, and guidance aside from the SIP may be used when developing dilution credits for non-priority pollutants;
- 3. Allow establishment of alternative cyanide dilution credits and mercury concentration triggers to reflect changes in wastewater treatment operations that implement water recycling or water conservation projects, or use new materials in production process; and
- 4. General cleanup, for example, add clarifications, update obsolete information, and improve document formatting.

More information about the project can be found throughout this Staff Report. The amendment language can be found in Appendix A. Appendix B contains the Environmental Checklist, which contains explanations and provides details concerning the environmental impact assessment. Based on the environmental analysis, no fair argument exists that adopting the proposed amendment or the reasonably foreseeable methods of compliance with the amendment could result in reasonably foreseeable adverse environmental impacts. As such, this substitute environmental documentation does not include the analyses required under California Code of Regulations, Title 23, section 3777(b)(3), (b)(4)(B), or (b)(4)(D), and no mitigation measures are necessary or proposed.

## 4.1.2 Economic Considerations

The economic considerations for the proposed Basin Plan amendment would be primarily for the implementation and compliance with the water quality-based effluent limits based on the corrected water quality objectives for the affected metals, the dilution credits for non-priority pollutants developed using other applicable policies, regulations, or guidance aside from SIP, the alternative dilution credits for cyanide, and the alternative mercury concentration triggers. The following are specific economic considerations based on the reasonably foreseeable methods of compliance.

- 1. Correcting the errors in the freshwater water quality objective calculation formulas would yield more stringent water quality objectives for chromium (III), copper, lead, nickel, silver, and zinc, which would theoretically result in more stringent water quality-based effluent limits for the affected wastewater treatment facilities. However, the Water Board has been implementing the correct water quality objectives in total recoverable forms for the affected metals in NPDES permits per the CTR and NTR criteria. Therefore, this amendment would not alter the Water Board's NPDES permitting process. Consequently, this correction would not alter plant operations and would not result in economic burdens to the dischargers.
- 2. Developing dilution credits based on applicable policies, regulations, or guidance other than the SIP could yield higher or lower water quality-based effluent limits for non-priority pollutants. When the Water Board develops dilution credits, reasonable economic burdens must be factored in the development process, when assessing whether the discharger can comply with the effluent limits based on the dilution credits. Therefore, significant economic consequences for the dischargers are not anticipated.
- 3. The water quality-based effluent limits based on alternative cyanide dilution credits or alternative mercury concentration triggers are proposed to facilitate the permitting of water recycling projects. These revisions would accommodate changes in operations associated with water recycling projects but would not in and of themselves require plant operations to be altered. Therefore, no economic burdens to dischargers are anticipated.
- 4. The alternative mercury concentration triggers for industrial dischargers with a material or operational change in production process could yield lower triggers for the dischargers. Industrial dischargers are anticipated to have material and operational changes in production processes as a result of market factors and resource limitations, such as shifting away from fossils fuels. These changes are anticipated to occur with or without this amendment and are also anticipated to reduce mercury concentrations in industrial waste streams. Further, since the alternative triggers will be based on performance, it is not expected the discharger would have difficulty to comply with the new lower triggers; therefore, no economic burdens to the dischargers are anticipated.

Therefore, the Water Board does not expect construction of new treatment facilities, or upgrading of existing treatment facilities, or implementation of aggressive measures to comply with the new effluent limits/mercury triggers to occur, which would result in significant economic burdens to the dischargers or to the community or result in potential significant environmental impacts.

## 4.1.3 Consideration of Alternatives to the Proposed Amendment

Since no significant environmental effect is expected because of this Basin Plan amendment, alternative analysis is not considered for the CEQA analysis.

## 4.2 Antidegradation Analysis

California's "Statement of Policy with Respect to Maintaining High Quality of Waters in California," was adopted on October 28, 1968 (Resolution 68-16). Resolution 68-16 serves as the state's Antidegradation Policy, which is consistent with the federal antidegradation policy contained in the Code of Federal Regulations, title 40, section 131.12. It states that where a receiving water is of higher quality than applicable water quality standards, the higher water quality must be maintained unless certain conditions are met. Specifically, any decrease in water quality (1) must be consistent with the maximum benefits to the people of the state, (2) must not unreasonably affect any current or anticipated beneficial uses, and (3) must not result in lower water quality than that prescribed in the policies Activities that produce an increased volume or concentration of waste that discharge to existing high quality waters will be required to meet waste discharge requirements that will "result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained." This section discusses how the proposed changes in the Basin Plan amendment meet the antidegradation requirements.

## 4.2.1 Correcting Errors in Freshwater Water Quality Objective Formulas

Correcting the errors in the metals' objective calculation formulas would yield lower (more stringent) water quality objectives because the formulas currently in the table footnotes for the affected metals reflect total recoverable metals, not dissolved metals as the Basin Plan states. Correctly factoring in water-effect ratios and conversion factors will result in lower values. In practice, NPDES permitting staff have been using the correct equations to undertake reasonable potential analyses and calculate effluent limits, consistent with the CTR. Thus, this change complies with the Antidegradation Policy because the resulting water quality-based effluent limits would be no less stringent than they are now, therefore, there would be no degradation of water quality as a result of the wastewater discharges.

## 4.2.2 Additional Basis for Developing Dilution Credits for Non-Priority Pollutants

Use of policies and regulations other than the SIP to establish dilution credits for non-priority pollutants is allowed and may yield somewhat higher or lower dilution credits. Such changes would be unlikely to degrade water quality because they would likely be based on other applicable regulations (e.g., the Toxicity Provisions) or authoritative guidance, such as the Technical Support Document (the State Water Resources Control Board relied heavily on the Technical Support Document when developing the SIP). However, without knowing specific circumstances, the potential for degradation cannot be evaluated at this time. Any possible degradation would be evaluated in accordance with the applicable antidegradation policies when issuing the permits.

## 4.2.3 Alternative Cyanide Dilution Credits and Mercury Concentration Triggers

Establishing alternative cyanide dilution credits and mercury concentration triggers to accommodate water recycling projects would not violate the Antidegradation Policy as explained below.

## Alternative Cyanide Dilution Credits

Establishing alternative cyanide dilution credits to accommodate water recycling projects may result in higher discharge concentrations. However, it will not increase the amount (mass) of cyanide discharged because the cyanide in the concentrated recycled water waste streams is from the treated wastewater used to produce the recycled water. The increased cyanide concentrations are unlikely to degrade water quality because cyanide dissipates rapidly in receiving waters (Water Board, 2006b) and the alternative dilution credits are to be established following SIP procedures. Therefore, even if some degradation were to occur, compliance with SIP requirements would ensure water quality standards are maintained.

## Alternative Mercury Concentration Triggers

The current mercury concentration triggers in the San Francisco Bay Mercury TMDL were based on treatment plant performance data before 2006. Treatment plants have either remained at the same technology level or improved since then. Allowing alternative performance-based mercury triggers would not affect TMDL wasteload allocations or their implementation. The mercury effluent limits in the Mercury and PCBs Watershed Permit (Water Board, 2022) implement the wasteload allocations and would remain unchanged. Both the mass load allocations and the concentration effluent limits will ensure water quality standards are protected in the receiving water.

The proposed changes for alternative cyanide dilution credits and mercury concertation triggers are associated with water recycling and water conservation. Any potential degradation, however unlikely, will be consistent with the maximum benefit to the people of the State by increasing water availability and water system resilience. The changes will not unreasonably affect beneficial uses or result in water quality that is lower than applicable objectives. Permits would continue to require the best practicable treatment or control to avoid pollution and nuisance and to maintain water quality consistent with the maximum benefit to people of the State.

## 4.3 Antibacksliding Analysis for Future NPDES Permits

In addition to satisfying the requirements of the antidegradation policies, the Water Board must ensure that it complies with Clean Water Act's anti-backsliding requirements when modifying or reissuing NPDES permits. A modified or reissued NPDES permit cannot contain effluent limits, standards, or conditions that are less stringent than those in the previous permit unless specific conditions are met (33 U.S.C. §1342(o); 40 C.F.R.§122.44(I)). If the implementation of the changes in this Basin Plan amendment results in backsliding in a particular NPDES permit, the Water Board will determine on a case-by-case basis whether backsliding is acceptable under the applicable Clean Water Act provisions or the regulation. If backsliding does not meet the requisite conditions in a particular instance, then the Water Board may not implement the less stringent requirement in the NPDES permit.

## 4.4 No Scientific Peer Review is Required

Health and Safety Code section 57004 requires external peer review of the scientific basis and scientific portions of a proposed rule. "Scientific basis" and "scientific portion" mean "those foundations of a rule that are premised upon, or derived from, empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirement for the protection of public health or the environment." (Health and Safety Code, § 57004(a)(2).) Additional peer review is not required for this proposed Basin Plan amendment because the scientific portions that inform the amendment are based on federal water quality criteria that were subjected to extensive peer review and previously peer-reviewed policies.

One component of this project would result in different water quality objectives for several metals, but the revision is to correct errors and make the objectives consistent with the CTR and NTR, both of which have gone through extensive scientific peer review. Therefore, the proposed amendment has satisfied the peer review requirement of Health and Safety Code Section 57004, and no additional peer review is needed.

## 5 References

California Natural Resources Agency (2022). <u>California's Water Supply Strategy – Adapting to a</u> <u>Hotter, Drier Future</u>, August 2022.

<u>California Toxics Rule (2000)</u>. Water Quality Standards: Establishment of Water Quality Criteria for Toxic Priority Pollutants for the State of California, May 18, 2000. Codified in 40 CFR 131.38.

<u>National Toxics Rule (1992)</u>. Water Quality Standards: Establishment of Water Quality Criteria for Toxic Priority Pollutants, 57 FR 60848, December 22, 1992, as amended in 1995 by the "Stay of Federal Water Quality Criteria for Metals." Codified in 40 CFR 131.36.

U.S. Environmental Protection Agency (U.S. EPA) (1980). <u>Ambient Water Quality Criteria for Silver</u>. October 1980, EPA 440/5-80-071.

U.S. EPA (1985a). <u>Guidelines for Deriving Numerical National Water Quality Criteria for the</u> <u>Protection Of Aquatic Organisms and Their Uses</u>.

U.S. EPA (1985b). <u>Ambient Water Quality Criteria for Cadmium – 1984</u>. January 1985, EPA 440/5-84-032.

U.S. EPA (1985c). <u>Ambient Water Quality Criteria for Chromium – 1984</u>. January 1985, EPA 440/5-84-029.

U.S. EPA (1985d). <u>Ambient Water Quality Criteria for Lead – 1984</u>. January 1985, EPA 440/5-84-027.

U.S. EPA (1996a). <u>1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water</u>, September 1996, EPA-820-B-96-001.

U.S. EPA (1996b). <u>The Metal Translator: Guidance for Calculating A Total Recoverable Permit</u> <u>Limit from a Dissolved Criterion</u>. June 1996, EPA-823-B-96-007.

U.S. EPA (1991). <u>Technical Support Document for Water-Quality Based Toxics Control (TSD)</u>, March 1991, EPA/505/2-90-001.

State Water Resources Control Board (State Board) (2020). <u>State Policy for Water Quality Control:</u> <u>Toxicity Provisions [Also for inclusion in the Water Quality Control Plan for Inland Surface Waters,</u> <u>Enclosed Bays, and Estuaries of California for waters of the United States]</u>, <u>December 1, 2020, and</u> <u>amendments</u>.

State Water Resources Control Board (State Board) (2005). <u>Policy for Implementation of Toxics</u> <u>Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)</u>, February 2005.

San Francisco Bay Regional Water Quality Control Board (Water Board). <u>The Water Quality</u> <u>Control Plan for the San Francisco Bay Basin (the Basin Plan)</u>.

San Francisco Bay Regional Water Quality Control Board (Water Board) (2006a). Final Staff Report for Proposed Basin Plan Amendment and Staff Report for Revised Total Maximum Daily Load (TMDL) and Proposed Mercury Water Quality Objectives, August 1, 2006.

December 2023

San Francisco Bay Regional Water Quality Control Board (Water Board) (2006b). <u>Final Staff</u> <u>Report for Proposed Site-Specific Water Quality Objectives for Cyanide for San Francisco Bay</u>, December 2006.

San Francisco Bay Regional Water Quality Control Board (Water Board) (2022). <u>Waste Discharge</u> <u>Requirements for Mercury and PCBs from Municipal and Industrial Wastewater Discharges to San</u> <u>Francisco Bay, Order No. R2-2022-0038</u>, NPDES No. CA0038849.

## Appendix A – Annotated Basin Plan Amendment

PROPOSED BASIN PLAN AMENDMENT

Revisions indicated in single under<u>line</u>/strikeout represent new or revised language.

## 1. Proposed changes to Table 3-4

Table 3-4:	Freshwater <sup>a</sup> Water Quality Objectives for Toxic Pollutants for Surface
	Waters (all values in µg/L)

Compound	4-day Average	1-hr Average
Arsenic <sup>b, c, d</sup>	150	340
Cadmium <sup>ь, d</sup>	е	е
Chromium III <sup>c, d, f</sup>		
Chromium VI <sup>b, c, d, g</sup>	11	16
Copper <sup>b, c, d</sup>	9.0 <sup>h</sup>	13 <sup>h</sup>
Cyanide <sup>i</sup>		
Lead <sup>b, c, d</sup>	2.5 <sup>j</sup>	65 <sup>j</sup>
Mercury <sup>k</sup>		2.4
Nickel <sup>b, c, d</sup>	52 <sup>1</sup>	470 <sup>1</sup>
Selenium <sup>m</sup>		
Silver <sup>b, c, d</sup>		3.4 <sup>n</sup>
Tributyltin°		
Zinc <sup>b, c, d</sup>	120 <sup>p</sup>	120 <sup>p</sup>

Notes:

- a. Freshwaters are those in which the salinity is equal to or less than 1 part per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. Unless a site-specific objective has been adopted, these objectives shall apply to all freshwaters except for the South Bay south of Dumbarton Bridge, where the California Toxics Rule (CTR) applies. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the marine (Table 3-3) and freshwater objectives.
- b. Source: 40 CFR Part 131.38 (California Toxics Rule or CTR), May 18, 2000.
- c. These objectives for metals are expressed in terms of the dissolved fraction of the metal in the water column.
- d. These objectives are expressed as a function of the water-effect ratio (WER), which is a measure of the toxicity of a pollutant in site water divided by the same measure of the toxicity of the same pollutant in laboratory dilution water. The 1-hr. and 4-day objectives = table value × WER. The table values assume a WER equal to one.
- e. The objectives for cadmium and other noted metals are expressed in the total recoverable form by formulas where H = In (hardness) as CaCO<sub>3</sub> in mg/l: The four-day average objective for cadmium is <u>a</u> <u>WER times</u>  $e^{(0.7852H-3.490)}$ . This is 1.1 µg/l at a hardness of 100 mg/l as CaCO<sub>3</sub>. The one-hour average objective for cadmium is <u>a WER times</u>  $e^{(1.128H-3.828)}$ . This is 3.9 µg/l at a hardness of 100 mg/l as CaCO<sub>3</sub>.

- f. Chromium III criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 180 ug/l (4-day average) and 550 ug/l (1-hr. average). The objectives for chromium III are based on hardness. The values in this footnote assume a hardness of 100 mg/l CaCO<sub>3</sub>. At other hardnesses, the objectives must be calculated using the following formulas where H = In (hardness): The 4-day average objective for chromium III is a WER times a conversion factor (CF) times e<sup>(0.8190H+1.561)</sup>. The 1-hour average for chromium III is a WER times a CF times e<sup>(0.8190H+3.688)</sup>. The CF (or "translator") adjusts the criterion expressed as the total recoverable fraction in the water column to an objective expressed as the dissolved fraction in the water column. If a site-specific CF is unavailable, the CTR CF (40 C.F.R. section 131.38(b)(2)(iv), "Table 2 to paragraph (b)(2) of this section") may be used.
- g. This objective may be met as total chromium.
- h. The objectives for copper are based on hardness. The table values assume a hardness of 100 mg/I CaCO<sub>3</sub>. At other hardnesses, the objectives must be calculated using the following formulas where H = In (hardness): The 4-day average objective for copper is <u>a WER times a CF times</u> e<sup>(0.8545H-1.702)</sup>. The 1-hour average for copper is <u>a WER times a CF times</u> e<sup>(0.9422H-1.700)</sup>. If a site-specific CF is unavailable, the CTR <u>CF may be used</u>.
- i. Cyanide criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.2 ug/l (4-day average) and 22 ug/l (1-hr. average).
- j. The objectives for lead are based on hardness. The table values assume a hardness of 100 mg/l CaCO<sub>3</sub>. At other hardnesses, the objectives must be calculated using the following formulas where H = In (hardness): The 4-day average objective is a WER times a CF times e<sup>(1.273H-4.705)</sup>. The 1-hour average for lead is a WER times a CF times e<sup>(1.273H-1.460)</sup>. If a site-specific CF is unavailable, the CTR CF may be used.
- k. Source: U.S. EPA Quality Criteria for Water 1986 (EPA 440/5-86-001). The 1-hour average value continues to apply to waters specified in Table 3-4A. For inland surface waters other than those covered under Table 3-4A, refer to Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California —Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Statewide Mercury Provisions).
- I. The objectives for nickel are based on hardness. The table values assume a hardness of 100 mg/l CaCO<sub>3</sub>. At other hardnesses, the objectives must be calculated using the following formulas where H = In (hardness): The 4-day average objective is <u>a WER times a CF times</u> e<sup>(0.8460H+0.0584)</sup>. The 1-hour average objective is <u>a WER times a CF times</u> e<sup>(0.8460H+2.255)</sup>. If a site-specific CF is unavailable, the CTR CF may be used.
- m. Selenium criteria were promulgated for all San Francisco Bay/Delta waters in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.0 ug/l (4-day average) and 20 ug/l (1-hr. average), expressed in the total recoverable form.
- n. The objective for silver is based on hardness. The table value assumes a hardness of 100 mg/l CaCO<sub>3</sub>. At other hardnesses, the objective must be calculated using the following formula where H = In (hardness): The 1-hour average objective for silver is <u>a WER times a CF times</u> e<sup>(1.72H-6.52)</sup>. If a site-specific CF is <u>unavailable</u>, the CTR CF may be used. U.S. EPA has not developed a 4-day criterion.
- Tributyltin is a compound used as an antifouling ingredient in marine paints and toxic to aquatic life in low concentrations. U.S. EPA has published-draft criteria for protection of aquatic life. <u>Ambient Aquatic Life</u> <u>Water Quality Criteria for Tributyltin (TBT) Final (EPA 822-R-03-031, December 2003) (Federal Register:</u> December 27, 2002, Vol. 67, No. 249, Page 79090-79091). These criteria are cited for advisory purposes. The draft criteria may be revised.
- p. The objectives for zinc are based on hardness. The table values assume a hardness of 100 mg/l CaCO<sub>3</sub>. At other hardnesses, the objectives must be calculated using the following formulas where H = In (hardness): The 4-day average objective for zinc is <u>a WER times a CF times</u> e<sup>(0.8473H+0.884)</sup>. The 1-hour average for zinc is <u>a WER times a CF times</u> e<sup>(0.8473H+0.884)</sup>. If a site-specific CF is unavailable, the CTR CF may be used.

## 2. Proposed Change to Section 4.6.1.2

4.6.1.2 Shallow Water Discharges

• • •

However, dilution credit may be granted on a discharger-by-discharger and pollutant-bypollutant basis. <u>Dilution credits for priority pollutants shall be</u> based on provisions of the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California (SIP)." <u>Dilution credits for non-priority pollutants may be based on the SIP or other</u> <u>applicable policies, regulations, or guidance.</u> In making this determination, the Water Board will grant dilution credit on a pollutant-by-pollutant basis if the discharger demonstrates that an aggressive pretreatment and source control program is in place, including the following:

..."

#### 3. Proposed Change to Section 4.7.2.2

4.7.2.2 Cyanide

• • •

Effluent limits for shallow water dischargers that have been granted an exception to Basin Plan Prohibition 1 shall be based on the dilution credits set forth in Table 4-6. <u>Alternatively, effluent</u> <u>limits for these shallow water dischargers may be based on updated dilution credits derived in accordance with the SIP requirements to account for water conservation or water recycling projects.</u> Setting forth dilution credits in Table 4-6 does not authorize discharges into shallow waters. Each discharger must continue to satisfy all requirements for an exception to Basin Plan Prohibition 1.

•••

### 4. Proposed Change to Section 7.2.2.6

7.2.2.6 Mercury TMDL Implementation

#### Municipal Wastewater

• • •

Effluent mercury trigger concentrations for secondary treatment facilities are a daily maximum of 0.065  $\mu$ g/L total mercury and monthly average of 0.041  $\mu$ g/L total mercury. For advanced treatment facilities, effluent mercury trigger concentrations are a daily maximum of 0.021  $\mu$ g/L total mercury and a monthly average of 0.011  $\mu$ g/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water conservation or water recycling projects.

...

#### Industrial Wastewater

... Includes an action plan and time schedule to correct and prevent trigger exceedances. Effluent mercury trigger concentrations are a daily maximum of 0.062  $\mu$ g/L total mercury and monthly average of 0.037  $\mu$ g/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water recycling projects or when there is material and substantial alteration or addition to the permitted facility.

• • •

## Appendix B – Environmental Checklist

## 1. Project Title:

Basin Plan Amendment to Update Fresh Water Quality Objectives, Dilution Credits, and Mercury Triggers

## 2. Lead Agency Name and Address:

San Francisco Bay Regional Water Quality Control Board (Water Board) 1515 Clay Street, Suite 1400 Oakland, California 94612

### 3. Contact Person:

Tong Yin, Tong.Yin@waterboards.ca.gov, (510) 622-2418

### 4. Project Locations:

The San Francisco Bay Region, including all or part of the nine counties: Alameda, Contra Costa, Marin, Napa, Petaluma, San Francisco, San Mateo, Santa Clara, and Sonoma.

### 5. Project Sponsor's Name & Address:

San Francisco Bay Regional Water Quality Control Board 1515 Clay Street, Suite 1400 Oakland, California 94612

### 6. General Plan Designation: Not Applicable

### 7. Zoning: Not Applicable

## 8. Description of Project:

The project is a proposed Basin Plan amendment to (1) Correct errors in freshwater objective calculation formulas for selected metals to be consistent with the California Toxics Rule (CTR) or National Toxics Rule (NTR), from where these objectives originate; (2) allow the Water Board to use other applicable policy and guidance documents beyond the State Implementation Policy (SIP) when developing dilution credits for non-priority pollutants; (3) allow the Water Board to establish alternative cyanide dilution credits and mercury concentration triggers to reflect changes in wastewater treatment operations that implement water recycling projects or use new materials in industrial production process; and (4) General cleanup, for example, add clarifications, update obsolete information, and improve document formatting.

### 9. Surrounding Land Uses and Setting:

The land uses and setting are those of the entire San Francisco Bay region, except the coastal region that drain to the ocean, where Ocean Plan applies.

### 10. Other public agencies whose approval is required:

The State Water Board, the California Office of Administrative Law, and U.S. EPA must approve this Basin Plan amendment following adoption by the Water Board.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On May 1, 2023, Water Board staff sent certified mail to all 27 California Native American tribes in the project area, including the five Assembly Bill No. 52 (AB 52 Native Americans: California Environmental Quality Act) tribes (namely, the Federated Indians of Graton Rancheria (FIGR), Mishewal Wappo Tribe of Alexander Valley, Tamien Nation, Wilton Rancheria, and Yocha Dehe Wintun Nation) pursuant to Public Resources Code section 21080.3.1; as well as the other 22 federally or non-federally recognized tribes (e.g., Amah Mutsun Tribal Band, Cachil Dehe Band of Wintun Indians of the Colusa Indian Community) to inform them of this project.

FIGR requested a consultation and Water Board staff met with FIGR on June 27, 2023. The Amah Mutsun Tribal Band of San Juan Bautista (AMTB) sent an email on May 15, 2023, asking the project to comply with Sacred Lands Files (SLF) and California Historical Resource Information Systems (CHRIS) and for the Water Board to reach out to the Native American Heritage Commission (NAHC). We responded that this project is a Basin Plan amendment that is not subject to CHRIS. They also indicated interest in meeting with the Water Board in late July or August. Yocha Dehe Wintun Nation requested to receive continued updates on this project.

On June 9, 2023, Water Board staff reached out to 20 environmental justice communities to inform them of the opportunity to attend the public workshop and CEQA scoping meeting on July 11, 2023, and ways to receive future notices on this project by subscribing through <u>Govdelivery</u>.

#### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The project and its reasonably foreseeable methods of compliance would not have any significant adverse impacts on the environment; hence, there are no physical, biological, social and/or economic factors that might be affected by the proposed project or compliance with it. See the checklist on the following pages for more details.

#### ENVIRONMENTAL CHECKLIST

<u>I. AESTHETICS.</u> Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				$\mathbf{X}$
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				$\boxtimes$

We do not anticipate that the project would impact aesthetics because this project would not result in additional construction or change of land use.

II. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

Potentially	Less Than	Less	No
Significant	Significant	Than	Impact
Impact	with	Significant	
	Mitigation	Impact	
	Incorporated	-	

- 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) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

or nd), as e of the Itural		X
use, or		X
zoning es ned by		$\boxtimes$
s I(g))? n of		$\boxtimes$
nment result		X

We do not anticipate that the project would impact agricultural or forest resources because this project would not involve any physical change of resources.

<u>III. AIR QUALITY.</u> Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				$\mathbf{X}$
b) 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?				X
c) Expose sensitive receptors to substantial pollutant concentrations?				$\mathbf{X}$
<ul> <li>Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</li> </ul>				$\boxtimes$

We do not anticipate that the project would have negative impacts to air quality because this project would not result in activities that emit pollutants into the air.

IV. BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 DFG or USFWS?			X	

hab idei	ve a substantial adverse effect on any riparian oitat or other sensitive natural community ntified in local or regional plans, policies, ulations or by the DFG or USFWS?		$\mathbf{X}$
fede limi thro	ve a substantial adverse effect on state or erally-protected wetlands (including, but not ted to, marsh, vernal pool, coastal, <i>etc.</i> ) ough direct removal, filling, hydrological erruption or other means?		X
nati or v cor	erfere substantially with the movement of any ive resident or migratory fish or wildlife species with established native resident or migratory ridors, or impede the use of native wildlife sery sites?		$\mathbf{X}$
, pro	nflict with any local policies or ordinances tecting biological resources, such as a tree servation policy or ordinance?		X
Ć Cor	nflict with the provisions of an adopted Habitat nservation Plan, Natural Community nservation Plan, or other approved local,		X

We do not anticipate the project would impact biological resources. Even if the alternative dilution credits may be higher than the numbers currently in the Basin Plan, they would be developed according to the State Implementation Plan or other applicable policies, which ensure the dilution credits and effluent limits based on the alternative dilution credits protect aquatic life and biological resources. The change of mercury concentration triggers would not change the effluent limits or mass load limits, which are the requirements that ensure water quality and biological resources are protected.

regional, or state habitat conservation plan?

There could be some slight biological effect within the mixing zone when the treated wastewater is first discharged into the receiving water. A higher alternative dilution credit for cyanide would require a slightly larger mixing zone. However, cyanide dissipates quickly in the receiving water, the mixing zone would be determined based on SIP requirements/procedure, which would still yield protective water quality-based effluent limits to protect the aquatic life. Alternative mercury concentration triggers will still be lower than the water quality-based effluent limits in the NPDES permits, which is one key mechanism (the other one is the mass load allocations) to protect the biological resources.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<ul> <li>a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?</li> </ul>				X
<ul> <li>b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?</li> </ul>				X
c) Disturb any human remains, including those interred outside of formal cemeteries?				$\boxtimes$

We do not anticipate that the project would impact cultural resources. The project is not expected to trigger construction activities or cause increased noise, transportation, or disturbance in the vicinity of the wastewater treatment facilities.

VI. ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				$\mathbf{X}$

We do not anticipate that the project would impact energy significantly. The wastewater treatment facilities that would get alternative dilution credits or mercury concentration triggers would be operated in the similar manner, i.e., no additional treatment of the blended wastewater at the treatment facility is anticipated.

<u>VI</u>	I. GEOLOGY and SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
	<ul> <li>i) Rupture of a known earthquake fault, as delineated in 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 &amp; Geology Special Publication 42.</li> </ul>				X
	ii) Strong seismic ground shaking?				X
	iii)Seismic-related ground failure, including liquefaction?				X
	iv) Landslides?				X
b)	Result in substantial soil erosion or the loss of topsoil?				X
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?				X
d)	Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X

e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?		X
<li>f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</li>		$\boxtimes$

We do not anticipate that the project would impact geology and soils. The project would not result in any physical changes of the wastewater treatment facilities and surrounding areas, nor to the lands within the region. Therefore, the geology and soils would not be impacted.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				$\boxtimes$
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				$\mathbf{X}$

We do not anticipate that the project would impact greenhouse gas emissions because this project would not result in activities, e.g., transportation, construction, that produce greenhouse gas emissions.

IX. HAZARDS and HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				$\boxtimes$
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?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or				X

to the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adop within two miles of a public airport or a public airport, would the project result in a safety haz or excessive noise for people residing or work in the project area?	ted, use ard		$\boxtimes$
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			$\boxtimes$
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?			X

We do not anticipate that the project would impact hazards and hazardous materials. Treatment facilities would operate and handle their wastes in the same manner as they do now.

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			$\boxtimes$	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				X
<ul><li>(i) result in substantial erosion or siltation on- or off-site;</li></ul>				X
<ul> <li>(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</li> </ul>				X
<ul> <li>(iii) 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; or</li> </ul>				$\mathbf{X}$
(iv) impede or redirect flood flows?				$\mathbf{X}$
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				$\boxtimes$

We do not expect the project to significantly impact hydrology or water quality. The discharges from the wastewater treatment facilities would be subject to NPDES permits that implement

water quality standards, including water quality objectives necessary to protect beneficial uses and antidegradation policies. As discussed under "Biological Resources," there could be some local degradation of water quality, i.e., when the treated wastewater is first discharged in the receiving water and within the mixing zone. However, the Water Board will follow the SIP procedures to develop alternative dilution credits or mercury concentration triggers, and there are mechanisms, e.g., water quality-based effluent limits, TMDL mass loading allocations, to ensure the water quality is protected, and the impacts are minimized.

XI. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

There is no potential for the project to physically divide an established community or conflict with a land use plan or policy. The project would not result in construction of new treatment facilities.

XII. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?				X
<ul> <li>Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan,</li> </ul>				$\boxtimes$

or other land use plan?

The project will not result in any impacts on mineral resources. No mineral resources are needed to implement the project.

<u>XI</u>	II. NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b)	Generation of, excessive groundborne vibration or groundborne noise levels?				$\mathbf{X}$

c) For a project located within the vicinity of a private airstrip or 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 in or working in the project area to excessive noise levels?



We do not anticipate that the project would impact noise because construction of new treatment facilities or upgrade of current treatment facilities are not expected as a result of the Basin Plan amendment.

XIV. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area either directly ( <i>e.g.</i> , by proposing new homes and businesses) or indirectly ( <i>e.g.</i> , through extension of roads or other infrastructure)?				$\boxtimes$
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

We do not anticipate that the project would impact population or housing. The project would not increase wastewater treatment capacity and would therefore not stimulate additional population and housing construction.

XV. PUBLIC SERVICES.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				$\mathbf{X}$
Police protection?				$\mathbf{X}$
Schools?				$\mathbf{X}$
Parks?				X
Other public facilities?				$\mathbf{X}$

We do not anticipate that the project would impact parks or other recreational facilities. The project would not result in additional wastewater treatment capacity, construction of new treatment facilities, or expansion of existing facilities such that a need for new schools or other services could occur.

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XVI. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?				$\boxtimes$
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				$\boxtimes$

We do not anticipate that the project would impact recreation facilities. The project would not result in additional wastewater treatment capacity, construction of new treatment facilities, or expansion of existing facilities such that a need for new parks or other services could occur.

XVII. TRANSPORTATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<ul> <li>a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?</li> </ul>				$\boxtimes$
<ul> <li>b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?</li> </ul>				$\boxtimes$
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

We do not anticipate that the project will impact transportation or traffic. The project would not result in increased transportation/traffic to or from wastewater treatment facilities because no construction of new treatment facilities or upgrade of current treatment facilities are expected as a result of the Bain Plan amendment.

XVIII. TRIBAL CULTURAL RESOURCES.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significa nt Impact	No Impac t
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				

X

X

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

We do not expect this project to have any impacts on tribal cultural resources. The project would not result in physical changes of tribal lands or fishery resources. Formal notification of this project was sent to 27 tribal contacts in letters dated May 1, 2020. See discussion at the beginning of this CEQA checklist for more details of the AB 52 and AB 2108 outreach to tribes.

XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental impacts?				$\boxtimes$
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				$\boxtimes$
c) Result in a determination by the wastewater treatment provider that 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?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				$\boxtimes$
g) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				$\boxtimes$

We do not anticipate that the project would impact utilities or service systems. The project would not result in construction of new treatment facilities or expansion of existing facilities.

<u>XX. WILDFIRE.</u> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
			$\mathbf{X}$
			$\boxtimes$
			X
			$\boxtimes$

We do not anticipate that the project would impact wildfires. The project would not alter the landscape or the surrounding areas in any way that could affect risks of wildfire.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially 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?				X
<ul> <li>b) Does the project have impacts that are individually limited, but cumulatively considerable?</li> <li>("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)</li> </ul>				X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				$\boxtimes$

**Potential to Degrade and Cumulative impacts:** The project is not expected to cause significant degradation or cumulative impacts to the environment. Discharge requirements would continue to implement water quality standards protective of beneficial uses.

Authority: Public Resources Code Sections 21083, 21084, 21084.1, and 21087.

**Reference:** Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.1 through 21083.3, 21083.6 through 21083.9, 21084.1, 21093, 21094, 21151; Sundstrom v. County of Mendocino, 202 Cal. App. 3d 296 (1988); Leonoff v. Monterey Board of Supervisors, 222 Cal. App. 3d 1337 (1990).

#### **Explanations of Impact Assessment**

Potential impacts stemming from the project are discussed above. Based on this review, we conclude that the project would result in no adverse impacts.

#### PRELIMINARY STAFF DETERMINATION

The proposed project COULD NOT have a significant effect on the environment, and, therefore, no alternatives or mitigation measures are proposed.

□ The proposed project MAY have a significant or potentially significant effect on the environment, and therefore alternatives and mitigation measures have been evaluated.

**Note:** Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal.App.3d 1337 (1990).