

RESPONSE TO DUBLIN SAN RAMON SERVICES DISTRICT LETTER

List of Authors

A list of public agencies, organizations, and individuals that provided comments on the Arroyo Lago Residential Project Final Environmental Impact Report (EIR) is presented below. Each comment has been assigned a code. Individual comments within each communication have been numbered so comments can be cross-referenced with responses. Following this list, the text of the communication is reprinted and followed by the corresponding response.

Author

Author Code

Local Agencies

Dublin San Ramon Services District..... DSRSD

Responses to Comments

Introduction

In accordance with the California Environmental Quality Act (CEQA) Guidelines, the County of Alameda (County), as the Lead Agency, evaluated the comments received on the Final EIR (State Clearinghouse No. 2023050339) for the Arroyo Lago Residential Project (proposed project) and has prepared the following responses to the comments received.

Comment Letters and Responses

The comment letter reproduced in the following pages follows the same organization as used in the List of Authors.

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July 21, 2025

Via Email and U.S. Mail

Albert Lopez
Planning Director
Rodrigo Orduña, AICP
Assistant Planning Director
County of Alameda
224 W. Winton Avenue, Rm 111
Hayward, CA 94544

Re: "Arroyo Lago" - Environmental Review of Subdivision (Vesting Tentative Tract Map TR-8243, PLN2022-00193) - Responses to Comments of Dublin-San Ramon Services District ("District") on Draft EIR and District's Supplemental Comments on Final EIR

Dear Mr. Lopez and Mr. Orduña:

Dublin-San Ramon Services District (the "District") appreciates the County of Alameda providing the District with a copy of the proposed Final Environmental Impact Report ("Final EIR") that the County prepared for the Arroyo Lago project (the "Project"). The Final EIR includes responses to the comments that DSRSD submitted on the Draft Environmental Impact Report ("Draft EIR") for this project. DSRSD has reviewed these responses and the July 7, 2025 Staff Report for this project, and we offer the following responses and supplemental comments, for your consideration.

As we understand the current status, both the Project site and another property, known as the East Lakes Property, are owned by Steelwave, and both properties are proposed to be annexed into the City of Pleasanton (the "City"). Based on our review of the materials from the February 18, 2025 Planning Commission meeting, we understand County Planning staff recommended supporting the annexation of these properties into the City. County Planning staff and the applicants appear to have understood that annexation would require new public infrastructure to serve the East Pleasanton area where these two properties are located, and a mechanism would need to be created for the property owners benefiting from that infrastructure to help finance its construction.

At the outset, DSRSD wishes to express its support for the proposed annexation. However, we continue to have concerns that this EIR does not provide a complete analysis for expected flows and loading to the wastewater treatment plan (WWTP) that will occur once the annexation is completed. DSRSD therefore requests that the EIR undertake further analysis of the Project's direct, indirect, and cumulative impacts on DSRSD's ability to process wastewater, and recirculation of the EIR so that these impacts and the

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measures needed to mitigate them will be disclosed to the public as required by the California Environmental Quality Act ("CEQA").

The EIR must identify and analyze the significant environmental impacts associated with all phases of the project. (State CEQA Guidelines, § 15126, subd. (a).) To achieve this outcome, it is essential that the project description used as the basis of the EIR's analysis be accurate, stable, and finite. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193. ["[A]n accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. A curtailed, enigmatic or unstable project description draws a red herring across the path of public input."].) Absent a complete and accurate project description, the EIR cannot fulfill one of its fundamental purposes under CEQA: the identification of feasible mitigation measures that would avoid, reduce, or offset the project's significant environmental impacts. (See, State CEQA Guidelines, §§ 15126, 15127.)

We believe the Final EIR falls short of meeting CEQA's standards, particularly with respect to the Project's direct and cumulative impacts on wastewater services. As you know, the EIR must identify and evaluate the cumulative impacts of the project in combination with past (baseline), present, and probable future projects. (State CEQA Guidelines, § 15130.)

DSRSD owns and operates the regional WWTP that provides wastewater treatment services to customers within the cities of Dublin, San Ramon, and, by contract, Pleasanton. Thus, if the Local Agency Formation Commission approves the annexation of the Project site and the East Lakes Property into the City, these properties will become covered by the contract between the City and DSRSD, and DSRSD will become the wastewater services provider for these properties. DSRSD also operates wastewater disposal and recycled water production facilities under contracts with Livermore-Amador Valley Water Management Agency ("LAVWMA") and Dublin San Ramon Service District-East Bay Municipal Utilities District Recycled Water Authority ("DERWA"), respectively.

The Final EIR – and, specifically, its analysis of Alternative 2 – fails to consider the impacts associated with the annexation component of the Project, which would result in DSRSD treating additional wastewater flow from the Project and other planned developments on the east side of Pleasanton (generally located within the area covered by the former East Pleasanton Specific Plan). As it now stands, the record lacks any evidence to support the Final EIR's conclusions that the DSRSD's regional WWTP has adequate capacity to handle additional flow and solids loading from the Project and other reasonably foreseeable east side developments.

The EIR is also impermissibly "piecemealing" its review of wastewater impacts, as noted in the City's letter commenting on the Draft EIR. Neither the Draft EIR nor the Final EIR contains any meaningful analysis of the cumulative impacts to the WWTP resulting

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from the Project and other reasonably foreseeable developments in the east Pleasanton area proceeding and being annexed into the City. The City Council has already indicated the City is moving forward with annexation of both developments. Therefore, the cumulative impacts of development and annexation of both projects, and other reasonably foreseeable projects, on regional wastewater generation and flows must be considered.

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Proceeding in this manner also means that the EIR fails to contain an accurate and stable Project description. For example, the two "package" plants that the EIR contemplated would be built as part of the wastewater service for the proposed Project will not be built if the Project site is annexed as now contemplated. Instead, different infrastructure improvements will be needed, as set forth below. The problem with this approach is that those reasonably foreseeable improvements were not identified or analyzed in the EIR, and the means of mitigating them has yet to be identified.

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In fact, DSRSD's utility master plans have not considered the impacts of DSRSD providing wastewater treatment service to Arroyo Lago, the East Lakes Project, and other adjacent developments which are proposed for annexation to the City. Consequently, the impacts of DSRSD providing wastewater service to this area have not yet been analyzed.

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After DSRSD learned from the City that the City was considering annexing the Project site and the East Lakes Project site, DSRSD began a study to evaluate the potential impacts to DSRSD's regional WWTP of increasing the number of connections by up to 1000 units in this area. DSRSD has undertaken this study as part of its Wastewater Treatment Plant and Biosolids Master Plan. Although the study began in June 2025, to date, neither the City nor the County of Alameda has contacted DSRSD for information related to its results. Yet this study is needed to identify whether improvements are needed to mitigate significant environmental impacts of at the regional WWTP. Likewise, to convey the additional flows associated with development of the Project and its adjacent properties to the regional WWTP, infrastructure improvements will be required to avoid causing sanitary sewer system overflows at or just upstream of the regional WWTP.

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Unfortunately, however, the Final EIR fails to analyze the impacts to the East Amador Lift Station (EALS) and other associated improvements which will be needed to mitigate the Project's significant direct and cumulative environmental impacts. As described in Section 6.4.3 of the 2024 Woodard Curran Sewer System Capacity Evaluation Report (the "Capacity Report"), which was included in Appendix A – WWTP Supporting Information for the Final EIR, DSRSD owns and operates EALS, which conveys flows generated within the City to the regional WWTP. Under the 1992 agreement between the City and DSRSD, DSRSD is required to operate and maintain EALS, and the City is responsible to pay for these improvements, since they exclusively benefit service connections within the City.

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As noted in the Capacity Report, the City's 2007 Master Plan recognized that the EALS pump station is undersized for current flows and improvements are needed. Thus, the

current facilities already fail to meet industry standards, and the additional connections that will result from the Project and other development in the east Pleasanton area will exacerbate this existing problem. If annexation is a component of the Project, the EIR must evaluate the range of improvements that would be needed to address both the current and anticipated future deficiencies due to increased flows resulting from annexation.

The City has also noted the lack of this analysis. Specifically, in its comments on the Draft EIR (PLEASANTON-62), the City indicated Alternative 2 does not include sufficient detail to enable the City to rely on the Draft EIR to annex the Project into the City and approve the proposed development of the Project site. The City expressly requested that Alternative 2 include a discussion of whether this alternative would *"...require new or expanded wastewater treatment facilities and whether the LAVWMA has adequate capacity to serve projected demand in addition to their existing commitments..."*

The Final EIR does not include any substantive analysis in response to this comment. Indeed, the Final EIR's response to comment states "the commenter does not raise any project-related environmental issues under CEQA with respect to the scope or adequacy of the alternatives analysis. . . ." This statement is incorrect. Appendix G of the State CEQA Guidelines, Section XIX, subsections a and c, Utilities and Service Systems, suggests that a project will have a significant environmental impact if it would "require or result in . . . the construction of new or expanded wastewater treatment . . . facilities, the construction . . . of which could cause significant environmental effects", or if it would "result in a determination by the wastewater treatment provider which serves or may serve the project" that it lacks adequate capacity "to serve the project's projected demand in addition to the provider's existing commitments." As noted above, DSRSD and the City have both identified impacts to the EALS that will be needed to convey the additional flows from the Project and other development in the east Pleasanton area to the WWTP. The EIR must identify, analyze, and identify all feasible mitigation for these significant environmental impacts.

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The Final EIR's responses do not adequately address DSRSD's comments, which raise significant environmental impacts to the regional WWTP resulting from Arroyo Lago, the East Lakes Project, and other future development. The Final EIR's response merely cites the 1992 agreement between DSRSD and the City and states that flow from the Project "would not result in an exceedance of the 7.135 million gallons per day (mgd) Pleasanton 'Committed Flow' as defined in the cited Agreement for Wastewater Disposal Services of November 3, 1992 (sections 3 and 8(c))." The response goes on to state that "the 1992 Agreement would allow the proposed project flow to be treated at DSRSD facilities without further consultation."

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The response has misread DSRSD's 1992 Agreement with the City. Consistent with industry standards, the 1992 Agreement defines "Treatment Capacity" with reference to

Biological Oxygen Demand ("BOD5") and Total Suspended Solids ("TSS") in addition to flow. In other words, flow is just one component of "Treatment Capacity."

Here, the record contains no evidence to support the conclusion that the additional flow, BOD, and TSS generated by the Project in combination with other reasonably foreseeable future developments would not exceed the City's allocated capacity in the regional WWTP. Indeed, water conservation has had a major impact on the ratio of flows to solids that are received at the regional WWTP. Because of conservation and reduced per capita water use, flows to the WWTP have remained relatively constant even as growth has occurred, but solids have continued to increase. As these water use trends project into the future, solids are likely to be the constraint in treating future wastewater flows.

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Moreover, the 1992 Agreement clearly states that neither DSRSD or Pleasanton can take any action that would cause DSRSD to violate its National Pollution Discharge Elimination System ("NPDES") permits. Likewise, Appendix G suggests that the EIR should analyze whether the Project would "violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality". (State CEQA Guidelines, Appendix G, Hydrology and Water Quality, Section X, subd. (a).) Therefore, the additional contribution of wastewater from the Project and future developments needs to be analyzed to identify any potential impacts and mitigate them so as to assure DSRSD's continued compliance with Order R2-2022-0024 NPDES Permit CA0037613, Effluent Limitations. (For your convenience, a copy of this permit is enclosed with this letter.)

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Likewise, the impacts of the Project and related regional development on DSRSD's ability to comply with the San Francisco Bay Nutrients Watershed Permit, which was adopted by the San Francisco Regional Water Quality Board in July 2024, must be evaluated. (See, Third Nutrient Watershed Permit, Order R2-2024-0013 NPDES Permit CA0038873.) The EIR fails to analyze the nutrient impacts of the Project and related development that could be annexed into the City, and thus the EIR fails to identify how potential nutrient impacts of this cumulative development will be mitigated. The Nutrients Watershed Permit requires Bay area agencies discharging to San Francisco Bay to collectively reduce nutrients by 40% over the next 10 years, as compared to a 2022 baseline. Any additional flow from the Project and future developments in the area will impact nutrient loading at the WWTP. These impacts must be identified, evaluated, and mitigated to the extent it is feasible to do so. (Again, for your convenience, a copy of this permit is enclosed with this letter.)

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Because the EIR has failed to analyze the annexation component of the Project and the potentially significant impacts to wastewater service, as outlined above, the EIR must be revised to include this information. The EIR should then be recirculated as required by Section 15088.5, subd. (a), of the State CEQA Guidelines.

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Each of the substantive defects discussed above is sufficient, standing alone, to preclude the County's certification of the EIR. The process the County is undertaking for this project is also invalid: it is procedurally inappropriate for the County to certify the EIR as "adequate" when (1) the County does not propose to approve the development of the Project, (2) the County will not be the land use authority with jurisdiction to approve the Project if the annexation proceeds, and (3) the EIR does not analyze the whole of the Project, including the impacts of annexation. These process flaws provide an additional basis that warrants reconsideration of the County's proposed course of action.

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Thank you for the opportunity to review the Final EIR. We appreciate your careful consideration of DSRSD's comments as part of this process. Should you have any questions about these comments, please feel free to contact me at (925) 875-2200 or jlee@dsrsd.com.

Sincerely,



JAN LEE

General Manager

Enc.: As indicated in text

cc: Douglas E. Coty, General Counsel, DSRSD
Jennifer T. Buckman, Special Counsel, DSRSD
Steve Delight, Engineering Director/District Engineer, DSRSD
Jackie Yee, Senior Engineer, DSRSD
Aubrey Rose, AICP, Planner, County of Alameda

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Local Agencies

Dublin San Ramon Services District (DSRSD)

Because of the volume of this comment letter (237 total pages), only the body of the comment letter is reproduced in this section, and the full letter and its attachments are included in Appendix A of this document. The attachments were reviewed in the preparation of this document, responded to in *Response to DSRSD-12*, and will be considered by the County's decisionmakers.

Response to DSRSD-1

The comment is noted. The County acknowledges DSRSD's support for annexation and its comments regarding wastewater treatment capacity. As discussed in Section 3.17 of the Draft EIR and Master Response 10 of the Final EIR, the proposed project would include a wastewater treatment plant (WWTP) sized to accommodate project-generated wastewater flows. The analysis in the EIR is based on the project as proposed at the time of publication of the Draft EIR, including the on-site WWTP. Annexation of the project site into the City of Pleasanton (City), if proposed, would constitute a separate and subsequent discretionary action and, therefore, may be subject to future environmental review by the City and the Alameda County Local Agency Formation Commission (LAFCo). A project alternative that would involve annexation and obviate the need for on-site water and wastewater infrastructure is analyzed as Alternative 2 in the EIR; however, it is not part of the proposed project.

As discussed in the EIR, if the project area is annexed to the City, wastewater collection would be provided by the City; wastewater treatment would occur at the DSRSD Regional Wastewater Treatment Facility (RWTF) in the City; and treated effluent would either be recycled via the existing DSRSD-East Bay Municipal Utilities (EBMUD) Recycled Water Authority (DERWA) recycled water system or exported via the Livermore-Amador Valley Water Management Agency (LAVWMA) facilities for discharge to San Francisco Bay through the existing LAVWMA outfall.

The comment also states that another property, known as the East Lakes Property, is also proposed to be annexed into the City. The East Lakes project is a separate proposed project, that is wholly independent from and not part of the proposed project. It is, however, identified as a cumulative project and is included in Table 3-1, Cumulative Projects, consistent with the requirements of CEQA Guidelines Section 15130. Inclusion of the East Lakes project in the EIR's cumulative project list and cumulative analysis ensures that its potential contribution to cumulative environmental effects has been addressed, even though it is not part of the proposed project itself.

If the project site, and/or any other project site (including the East Lakes Property), is annexed into the City, it is reasonable to assume that the City, in its discretion, would evaluate the possible limitations of its collection system to convey the wastewater as project approvals occur. No further response is required.

Response to DSRSD-2

The comment is noted.

Alternative 2 Analysis

Under CEQA, the analysis of environmental effects of alternatives need not be as thorough or detailed as the analysis of the project itself. Rather, the CEQA Guidelines Section 15126.6(d) states, “The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.” The significant adverse environmental effects of each alternative must be discussed, but in less detail than is required for the project’s effects. The EIR adheres to this standard by providing a comparative analysis that enables decision-makers and the public to understand the relative environmental impacts of each alternative, including Alternative 2.

If Alternative 2 were to be considered and the project site were to be annexed, wastewater treatment would occur at the DSRSD RWTF in the City, which operates under a National Pollutant Discharge Elimination System (NPDES) permit, and treated effluent would be recycled via DERWA or LAVWMA facilities. Under this alternative, the project would connect to the City’s sanitary sewer system directly and would not require construction of the off-site utility improvement included in the proposed project. Based on substantial evidence, the EIR determined that potential wastewater generated by the residential project under Alternative 2 would represent approximately 0.1 percent of the City’s total treatment capacity, not including the LAVWMA pipeline. This minimal contribution demonstrates that the alternative project would not exceed or strain existing treatment infrastructure.

Moreover, DSRSD’s compliance with the NPDES permit ensures that wastewater flows and loading are managed within permitted limits and subject to ongoing monitoring and enforcement. As outlined in CEQA Guidelines Section 15126.4(a)(1)(D), lead agencies may rely on compliance with existing regulatory programs as a basis for determining that impacts will be mitigated to a less-than-significant level. In this case, the RWTF’s existing capacity, combined with the regulatory oversight provided by the NPDES program, supports the conclusion that the project’s wastewater flows and loading would not result in significant environmental impacts.

Therefore, impacts related to recycled water and wastewater treatment under Alternative 2 would be less than significant, consistent with the findings for the proposed project.

If Alternative 2 were to be considered for approval, the City, in its discretion, may also undergo additional environmental review to ensure that any potential cumulative impacts related to annexation are evaluated and disclosed pursuant to CEQA. Additionally, DSRSD, as a responsible agency under CEQA, would be consulted during any future annexation or service extension. Should annexation proceed, the City and DSRSD would coordinate to address infrastructure connections, service agreements, and regulatory compliance. Please also refer to *Response to DSRSD-3* and *Response to DSRSD-10*, below.

Stable Project Description

Commenter recites general CEQA case law governing EIR “project descriptions,” and then states its belief that the EIR falls short of this standard. CEQA requires that an EIR includes a stable, accurate, and finite project description to allow for meaningful environmental analysis and public participation (CEQA Guidelines § 15124). In *County of Inyo*, the court noted that “[o]nly through an accurate view

of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR." (71 Cal.App.3d 185, 192)

However, an EIR's project description may identify alternative development schemes for a single proposed project. A project description that identifies such variations is permissible as long as the possible variations are fully described and separately evaluated, and the maximum possible scope of the project is clearly disclosed. Flexible parameters may be incorporated in a project description when project operations will be subject to changing conditions in the future. A change in the project does not necessarily render the project description inadequate unless the change would thwart the public's ability to participate in the process and comment meaningfully on the EIR.

This supports the principle that the potential approval of an alternative does not invalidate the stability of the project description, as long as the EIR provides a clear and consistent description of the proposed project and its alternatives.

Here, Chapter 2 of the EIR clearly identifies a finite proposed project. See EIR at ES-1 (describing the proposed project as a residential project consisting of 194 market-rate single-family homes with approximately 49 Accessory Dwelling Units (ADUs), an approximately 0.7-acre centrally-located park, and approximately 0.5 mile of designated public walking trails on an approximately 26.6-acre site, internal roadways and two driveways to facilitate access and circulation within the project site). Chapter 2 goes on to describe the proposed project's location, environmental setting, objectives, and required entitlements and approvals. Therefore, the Project Description complies with CEQA's requirements and is not rendered unstable by the possibility that an alternative may be approved.

Furthermore, CEQA Guidelines Section 15126.6 requires that an EIR evaluate a reasonable range of feasible alternatives that could avoid or substantially lessen significant environmental impacts. The fact that one of these alternatives may ultimately be selected reflects the purpose of CEQA—to inform decision-makers and the public of environmentally superior options—not a flaw in the project description.

Cumulative Impacts

Commenter recites a general principle of CEQA that the EIR must identify and evaluate cumulative impacts of a project, such as wastewater impacts. Here, the EIR appropriately analyzes the direct, indirect, and cumulative impacts of the proposed project, including wastewater generation. As currently proposed for approval, the proposed project would not be annexed into the City, and the proposed project would be served by the proposed WWTP, water storage and booster pump facility, recycled water storage facility, agricultural irrigation recycled water spray fields, and two bioretention areas. The EIR identified and evaluated all impacts, including cumulative impacts, related to wastewater services. Because the proposed project would construct a 1-acre WWTP with a treatment capacity of 50,000 gpd, the proposed project would not require the construction of new or expanded wastewater treatment or conveyance facilities beyond those provided in the proposed

project. Therefore, the proposed project would not have a cumulatively significant impact related to wastewater. No further response is required.

Response to DSRSD-3

The comment is noted. Please see *Response to DSRSD-2* for a discussion of the analysis of cumulative impacts related to the proposed project and a discussion of the level of environmental review required for Alternative 2. The comment generally alleges that cumulative impacts related to wastewater have not been adequately addressed in the Draft EIR. However, it does not provide any specific information, data, or factual evidence identifying a deficiency in the cumulative analysis or refuting the capacity findings presented in the document. CEQA Guidelines Section 15204(c) specifically states that public agencies should focus comments on environmental issues within their area of expertise and provide facts, reasonable assumptions based on facts, or expert opinion supported by facts. The comment does not present any facts or analysis that would contradict or challenge the capacity figures used in the Draft EIR, nor does the comment letter demonstrate that the RWTF would be unable to accommodate the cumulative wastewater flows resulting from the proposed project and other foreseeable development. In the absence of such evidence, the EIR's conclusion that cumulative wastewater impacts would be less than significant remains valid and supported by substantial evidence.

Additionally, please refer to Master Response 7, *The Project Considers the Whole of the Action and Does Not Improperly Piecemeal*, of the Final EIR. Master Response 7 explains why the proposed project considers the “whole of the action” and does not piecemeal environmental analysis, especially in regard to the East Lakes project. While multiple development projects may be considered by the City at some point, it is important to note that the East Lakes project remains an independent action from the proposed project with separate timelines, scopes, and environmental review processes. The East Lakes project would undergo its own CEQA evaluation and entitlement procedures, and approval of the proposed project does not imply or require approval of the East Lakes project, or vice versa. Accordingly, the environmental review of these two separate projects is not “piecemealed.” Additionally, the proposed project is not currently before the City, and the County cannot speak to the status, timing, or planning decisions related to the East Lakes project or any other development project under the jurisdiction of another public agency. The environmental analysis in the EIR is based on the scope and characteristics of that specific project and reasonably foreseeable cumulative projects. The County cannot speculate on the City's independent review and approval process. Any future annexation proposals would be subject to the City's development review process and would be required to comply with all applicable laws and regulations, including CEQA.

The infrastructure that is evaluated in the Draft EIR for the proposed project would require significant expansion, involving a separate and distinct permitting process, if it were to also serve the East Lakes project. To the extent the East Lakes project may seek to connect at some point in the future to utility infrastructure that is built as part of the proposed project, that infrastructure would need to be expanded and upgraded to accommodate the significant additional development that may ultimately be pursued by the East Lakes project, which would require a separate entitlement approval process and related CEQA review. As further described in Master Response 10, *Clarifying*

Information of the Wastewater Treatment Plant Operation and Maintenance, of the Final EIR, the off-site facilities included as part of the proposed project are sized specifically for the proposed project and would not be sized to accommodate the East Lakes project, which instead would need to obtain separate approval of new and/or expanded utilities in order to be operational, as noted above. Thus, the proposed project does not allow for unplanned growth as a result of developing the off-site utilities required to support the proposed project.

Based on the foregoing and as further documented in the EIR and other materials in the administrative record, the County has properly determined that the East Lakes project is an independent, stand-alone development proposal that would need to be analyzed in a separate environmental review process. In fact, to date, the County continues to process the East Lakes project applications for completeness pursuant to the Permit Streamlining Act, and incompleteness determinations issued to date have all assumed separate environmental analysis for the East Lakes project. Accordingly, there was no improper piecemealing, no change is warranted, and no further response is required.

Response to DSRSD-4

The comment is noted. Please refer to *Response to DSRSD-2*. The proposed project does not require any connections to DSRSD facilities and, therefore, would not have any impacts on DSRSD facilities or services. If Alternative 2 were to be considered for approval and the site were annexed into the City, additional CEQA analysis could be required to evaluate impacts to DSRSD facilities pursuant to CEQA. Furthermore, all other cumulative projects within the City that would connect to DSRSD facilities and services would be required to complete their own environmental review pursuant to CEQA. No further response is required.

Response to DSRSD-5

The comment is noted. Please refer to *Response to DSRSD-2* and *Response to DSRSD-4*. The proposed project does not require any connections to DSRSD facilities and, therefore, would not have any impacts on DSRSD facilities or services. If Alternative 2 were to be considered for approval and the project site were annexed into the City, additional CEQA analysis could be required to evaluate impacts to DSRSD facilities pursuant to CEQA. Furthermore, all other cumulative projects within the City that would connect to DSRSD facilities and services would be required to complete their own environmental review pursuant to CEQA. No further response is required.

Response to DSRSD-6

The comment is noted. DSRSD notes that it began a study related to wastewater in June 2025, after the Draft EIR was published for public review. As stated in the Draft EIR, the proposed project does not require any connections to DSRSD facilities and, therefore, would not result in any direct impacts to DSRSD infrastructure or services. The proposed project includes its own on-site wastewater treatment system, and no service extension or interconnection with DSRSD is proposed under the current project configuration.

As identified in *Response to DSRSD-2*, if Alternative 2 were to be considered for approval and the project site were annexed into the City, the provision of wastewater service by DSRSD would require separate discretionary approvals and infrastructure coordination. In that scenario, additional CEQA

review could be required to evaluate potential impacts to DSRSD facilities, including treatment capacity, conveyance infrastructure, and service agreements. The results of DSRSD's preliminary study, if completed, could be appropriately considered at that time.

Additionally, it is important to note that all other cumulative projects within the City that require discretionary approvals are independently subject to CEQA review. Each project must evaluate its own impacts on utilities and service systems, including wastewater treatment, and demonstrate compliance with applicable regulatory requirements and service capacity constraints.

The Notice of Preparation (NOP) for the Draft EIR was distributed in May 2023, initiating the formal scoping period during which DSRSD, other public agencies and members of the public were invited to identify environmental issues to be addressed in the EIR. The commenter, as a public agency, was included in the NOP distribution list and had the opportunity to raise concerns during that scoping period related to the scope of its utility master plans and potential cumulative impacts. In fact, the commenter provided a brief response to the NOP requesting, "that the scope of the Environmental Impact Report include details related to planned wastewater treatment. The information should include the responsible party to maintain the proposed wastewater treatment facility. The report should also include the plan for meeting regulatory requirements regarding wastewater treatment and disposal of treated wastewater". The specific issues raised in this comment were not submitted during the NOP comment period.

Finally, under CEQA Guidelines Section 15204(c), public agencies are expected to support their comments with facts, reasonable assumptions based on facts, or expert opinion supported by facts. The comment states that a study was started but does not provide results, specific evidence, or analysis demonstrating that the proposed project or Alternative 2 would result in significant impacts to DSRSD facilities under the current project configuration or Alternative 2. Accordingly, no further response or revision to the EIR is required.

Response to DSRSD-7

The comment is noted. The comment states that the EIR fails to analyze impacts to the East Amador Lift Station (EALS) and other associated improvements but incorrectly opines such improvements are needed to mitigate the proposed project's individual or cumulative impacts on wastewater utilities.

The EIR acknowledges that the EALS is part of the regional water infrastructure. However, the proposed project does not rely on the EALS for wastewater conveyance. The on-site WWTP described in the Project Description is designed to treat project-generated wastewater flows independently. Should annexation occur and the project connect to regional infrastructure, a separate CEQA analysis may be required to evaluate impacts to the EALS and other facilities pursuant to CEQA. CEQA does not require analysis of infrastructure not included in the proposed project (CEQA Guidelines § 15125(a)). The proposed project does not require any connections to DSRSD facilities and, therefore, would not have any impacts on DSRSD facilities or services.

As identified in *Response to DSRSD-2*, if Alternative 2 were to be considered for approval and the project site were annexed into the City, then the City could be required to prepare additional CEQA

review for the alternative, including reviewing any studies prepared by DSRSD and requiring any applicable improvements to the wastewater system to be funded and built.

As discussed in *Response to PLEASANTON-60* of the Final EIR, the purpose of the alternatives analysis under CEQA is to provide sufficient information such that a meaningful comparison of the relative merits can be made to foster informed decision-making about the project. It is not intended to serve as a “mini-EIR” for each identified alternative; i.e., incorporating a detailed, project-level specific evaluation of potential environmental impacts of the alternative at hand to be considered in isolation.

CEQA provides a mechanism for situations wherein an EIR is certified, and the project studied therein is later sought to be modified in a subsequent discretionary entitlement process. Pursuant to Section 15162 of the CEQA Guidelines, before proceeding with consideration of a project, CEQA requires the Lead Agency (or Responsible Agency, as applicable) to evaluate (a) whether any of the conditions set forth in Section 15162 has occurred, and (b) if so, whether the relevant condition(s) would materially affect the conclusions in the previously certified environmental document such that major revisions to that document would be necessary. Utilizing the criteria set forth in CEQA Guidelines Section 15162, the relevant public agency has an opportunity at that time to determine, based on substantial evidence in the record, whether the conditions of both (a) and (b) have been satisfied and thus whether further environmental review is required under CEQA.

The additional detailed information that the City suggested to include in the Alternative 2 discussion in their comment letter on the Draft EIR is not necessary to provide a meaningful comparison of the relative merits of Alternative 2 as compared to the proposed project. The Alternative 2 impact analysis sets forth an appropriate level of detail for purposes of a comparative analysis with the project’s environmental impacts. Furthermore, this comment has not provided any facts that refute the conclusions in the Draft EIR. No further response is required.

Response to DSRSD-8

The comment is noted. As stated above, the proposed project does not require any connections to DSRSD facilities and, therefore, would not have any impacts on DSRSD facilities or services.

As identified in *Response to DSRSD-2*, if Alternative 2 were to be considered for approval and the project site were annexed into the City, then the City could be required to prepare additional CEQA review for the alternative, including evaluating whether the alternative could result in impacts related to treatment capacity of DSRSD facilities. Furthermore, all other cumulative projects within the City that would connect to DSRSD facilities and services would be required to complete their own environmental review pursuant to CEQA.

The comment also suggests that in the event Alternative 2 is pursued, it could lead to potential issues with wastewater treatment capacity related to DSRSD’s 1992 Agreement with the City. However, the commenter does not identify any specific deficiencies in the Draft EIR’s analysis or provide technical information, indicating that the proposed project (or its alternatives) would result in significant impacts related to wastewater treatment capacity with respect to the 1992 Agreement. In the absence of facts to the contrary, it is reasonable for the County to assume that existing

regulations would be followed and applicable agreement terms would be upheld. Nonetheless, if Alternative 2 were pursued, the City would be the appropriate party to analyze the wastewater contributions in the context of the 1992 Agreement. No further response is required.

Response to DSRSD-9

The comment is noted. As stated above, the proposed project does not require any connections to DSRSD facilities and, therefore, would not have any impacts on DSRSD facilities or services. As such, the proposed project would not cause DSRSD to violate its NPDES permits. Furthermore, the proposed project, as evaluated in the Draft EIR, would have less than significant impacts related to water quality standards or groundwater quality.

As identified in *Response to DSRSD-2*, if Alternative 2 were to be considered for approval and the project site were annexed into the City, then, in that scenario, additional CEQA review for the alternative, including evaluating whether the alternative could violate any water quality standards or waste discharge requirements, could be required to evaluate potential impacts to DSRSD facilities. It is reasonable to assume that if annexation were considered, the alternative project would be conditioned to be consistent with all applicable regulations, including relevant NPDES permits. This future analysis would ensure that the alternative's potential impacts would be reduced to less than significant levels and that DSRSD would continue to be compliant with Order RS-2022-0024 NPDES Permit CA0037613, Effluent Limitations. The current EIR properly limits its analysis to the proposed project and provides enough information in the Alternative 2 discussion to provide a comparative analysis of impacts with regard to the proposed project. Furthermore, all other cumulative projects within the City that would connect to DSRSD facilities and services would be required to complete their own environmental review pursuant to CEQA.

The comment also suggests that in the event Alternative 2 is pursued, it could lead to potential NPDES permit issues. However, the commenter does not identify any specific facts to support this claim. The purpose of the public review and comment process on a Draft EIR and the related responses is intended to share expertise, disclose the basis for and methodologies used to complete the Draft EIR's analyses, check for accuracy, detect and correct omissions, discover public concerns, and solicit counter proposals for mitigation and/or alternatives. Comments that consist of speculation or unsupported criticism may be answered with only a general response.

CEQA Guidelines Section 15204, in part states, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." (CEQA Guidelines § 15204(c)). The comment regarding potential violations of the NPDES permit limitation does not identify any specific evidence of a violation or provide factual information, reasonable assumptions based on facts, or expert opinion supported by facts that a violation would occur. As such, it does not meet the threshold for substantial evidence under CEQA and cannot be used as a basis for altering the conclusions of the EIR. No further response is required.

Response to DSRSD-10

The comment is noted. As stated in *Response to DSRSD-2* above, the proposed project does not require any sanitary sewer services from DSRSD and, therefore, does not necessitate any additional sewer connections or upgrades to DSRSD facilities. As such, the proposed project would not impact DSRSD's ability to comply with the San Francisco Bay Nutrients Watershed Permit. Furthermore, the proposed project, as evaluated in the Draft EIR, would have less than significant impacts related to water quality standards or groundwater quality.

Under CEQA, it is appropriate and legally supported to assume that any alternative considered for approval would be subject to the same regulatory framework as the proposed project. This includes compliance with all applicable local, State, and federal laws, as well as permit conditions imposed by responsible and trustee agencies. CEQA Guidelines Section 15126.4(a)(1)(D) specifically allows reliance on compliance with existing regulatory programs as a basis for determining that impacts will be mitigated to a less than significant level. As identified in *Response to DSRSD-2*, if annexation of the project site were to be considered in the future, it is reasonable to assume that the City would conduct its own environmental review in its capacity as lead agency for annexation and City-level entitlements. It is also reasonable to assume that an annexed project would comply with the relevant requirements of the San Francisco Bay Nutrients Watershed Permit. However, because annexation is speculate at this time, the Draft EIR's analysis of the proposed project is appropriately confined to County-level approvals without annexation. Any future environmental analysis for an annexation of the project site would be required to ensure that the alternative's potential impacts would be reduced to less than significant levels and that DSRSD would continue to be compliant with the San Francisco Bay Nutrients Watershed Permit. The current EIR properly limits its analysis to the proposed project and provides enough information in the Alternative 2 discussion to provide a comparative analysis of impacts with regard to the proposed project. Furthermore, all other cumulative projects within the City that would connect to DSRSD facilities and services would be required to complete their own environmental review pursuant to CEQA. No further response is required.

Response to DSRSD-11

The comment is noted. Please refer to *Response to DSRSD-2* through *Response to DSRSD-10*. The Alternative 2 impact analysis in the EIR sets forth an appropriate level of detail for purposes of a comparative analysis with the proposed project's environmental impacts, and no recirculation of the Draft EIR is required. Additional environmental review may be required prior to any future discretionary actions taken by the City or LAFCo if Alternative 2 were to be considered and implemented.

The County's role as Lead Agency for the proposed project is appropriate under CEQA. The County has jurisdiction over the project site and the proposed development. CEQA Guidelines Section 15051(a) designates the Lead Agency as the public agency with principal responsibility for carrying out or approving a project. The EIR analyzes the whole of the proposed project as proposed and does not include annexation as a component. Should annexation of the project site be proposed, the City would assume jurisdiction and may conduct its own CEQA review within its discretion as lead agency of such a proposal. The County's certification of the EIR is procedurally valid. No further response is required.

Response to DSRSD-12

The commenter has attached a copy of an NPDES permit and a copy of the San Francisco Bay Nutrients Watershed Permit to the comment letter. The permits themselves do not contain any specific comments, questions, or concerns related to the proposed project analyzed in the EIR and, thus, do not raise any substantive issues requiring a response under CEQA. No revisions to the EIR are necessary in response to these attachments.

**Appendix A:
Full DSRSD Letter**



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Dublin, CA 94568-3018

phone (925) 828-0515
fax (925) 829-1180
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July 21, 2025

Via Email and U.S. Mail

Albert Lopez
Planning Director
Rodrigo Orduña, AICP
Assistant Planning Director
County of Alameda
224 W. Winton Avenue, Rm 111
Hayward, CA 94544

Re: "Arroyo Lago" - Environmental Review of Subdivision (Vesting Tentative Tract Map TR-8243, PLN2022-00193) - Responses to Comments of Dublin-San Ramon Services District ("District") on Draft EIR and District's Supplemental Comments on Final EIR

Dear Mr. Lopez and Mr. Orduña:

Dublin-San Ramon Services District (the "District") appreciates the County of Alameda providing the District with a copy of the proposed Final Environmental Impact Report ("Final EIR") that the County prepared for the Arroyo Lago project (the "Project"). The Final EIR includes responses to the comments that DSRSD submitted on the Draft Environmental Impact Report ("Draft EIR") for this project. DSRSD has reviewed these responses and the July 7, 2025 Staff Report for this project, and we offer the following responses and supplemental comments, for your consideration.

As we understand the current status, both the Project site and another property, known as the East Lakes Property, are owned by Steelwave, and both properties are proposed to be annexed into the City of Pleasanton (the "City"). Based on our review of the materials from the February 18, 2025 Planning Commission meeting, we understand County Planning staff recommended supporting the annexation of these properties into the City. County Planning staff and the applicants appear to have understood that annexation would require new public infrastructure to serve the East Pleasanton area where these two properties are located, and a mechanism would need to be created for the property owners benefiting from that infrastructure to help finance its construction.

At the outset, DSRSD wishes to express its support for the proposed annexation. However, we continue to have concerns that this EIR does not provide a complete analysis for expected flows and loading to the wastewater treatment plan (WWTP) that will occur once the annexation is completed. DSRSD therefore requests that the EIR undertake further analysis of the Project's direct, indirect, and cumulative impacts on DSRSD's ability to process wastewater, and recirculation of the EIR so that these impacts and the

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July 21, 2025
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measures needed to mitigate them will be disclosed to the public as required by the California Environmental Quality Act ("CEQA").

The EIR must identify and analyze the significant environmental impacts associated with all phases of the project. (State CEQA Guidelines, § 15126, subd. (a).) To achieve this outcome, it is essential that the project description used as the basis of the EIR's analysis be accurate, stable, and finite. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193. ["[A]n accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. A curtailed, enigmatic or unstable project description draws a red herring across the path of public input."].) Absent a complete and accurate project description, the EIR cannot fulfill one of its fundamental purposes under CEQA: the identification of feasible mitigation measures that would avoid, reduce, or offset the project's significant environmental impacts. (See, State CEQA Guidelines, §§ 15126, 15127.)

We believe the Final EIR falls short of meeting CEQA's standards, particularly with respect to the Project's direct and cumulative impacts on wastewater services. As you know, the EIR must identify and evaluate the cumulative impacts of the project in combination with past (baseline), present, and probable future projects. (State CEQA Guidelines, § 15130.)

DSRSD owns and operates the regional WWTP that provides wastewater treatment services to customers within the cities of Dublin, San Ramon, and, by contract, Pleasanton. Thus, if the Local Agency Formation Commission approves the annexation of the Project site and the East Lakes Property into the City, these properties will become covered by the contract between the City and DSRSD, and DSRSD will become the wastewater services provider for these properties. DSRSD also operates wastewater disposal and recycled water production facilities under contracts with Livermore-Amador Valley Water Management Agency ("LAVWMA") and Dublin San Ramon Service District-East Bay Municipal Utilities District Recycled Water Authority ("DERWA"), respectively.

The Final EIR – and, specifically, its analysis of Alternative 2 – fails to consider the impacts associated with the annexation component of the Project, which would result in DSRSD treating additional wastewater flow from the Project and other planned developments on the east side of Pleasanton (generally located within the area covered by the former East Pleasanton Specific Plan). As it now stands, the record lacks any evidence to support the Final EIR's conclusions that the DSRSD's regional WWTP has adequate capacity to handle additional flow and solids loading from the Project and other reasonably foreseeable east side developments.

The EIR is also impermissibly "piecemealing" its review of wastewater impacts, as noted in the City's letter commenting on the Draft EIR. Neither the Draft EIR nor the Final EIR contains any meaningful analysis of the cumulative impacts to the WWTP resulting

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from the Project and other reasonably foreseeable developments in the east Pleasanton area proceeding and being annexed into the City. The City Council has already indicated the City is moving forward with annexation of both developments. Therefore, the cumulative impacts of development and annexation of both projects, and other reasonably foreseeable projects, on regional wastewater generation and flows must be considered.

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Proceeding in this manner also means that the EIR fails to contain an accurate and stable Project description. For example, the two "package" plants that the EIR contemplated would be built as part of the wastewater service for the proposed Project will not be built if the Project site is annexed as now contemplated. Instead, different infrastructure improvements will be needed, as set forth below. The problem with this approach is that those reasonably foreseeable improvements were not identified or analyzed in the EIR, and the means of mitigating them has yet to be identified.

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In fact, DSRSD's utility master plans have not considered the impacts of DSRSD providing wastewater treatment service to Arroyo Lago, the East Lakes Project, and other adjacent developments which are proposed for annexation to the City. Consequently, the impacts of DSRSD providing wastewater service to this area have not yet been analyzed.

5

After DSRSD learned from the City that the City was considering annexing the Project site and the East Lakes Project site, DSRSD began a study to evaluate the potential impacts to DSRSD's regional WWTP of increasing the number of connections by up to 1000 units in this area. DSRSD has undertaken this study as part of its Wastewater Treatment Plant and Biosolids Master Plan. Although the study began in June 2025, to date, neither the City nor the County of Alameda has contacted DSRSD for information related to its results. Yet this study is needed to identify whether improvements are needed to mitigate significant environmental impacts of at the regional WWTP. Likewise, to convey the additional flows associated with development of the Project and its adjacent properties to the regional WWTP, infrastructure improvements will be required to avoid causing sanitary sewer system overflows at or just upstream of the regional WWTP.

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Unfortunately, however, the Final EIR fails to analyze the impacts to the East Amador Lift Station (EALS) and other associated improvements which will be needed to mitigate the Project's significant direct and cumulative environmental impacts. As described in Section 6.4.3 of the 2024 Woodard Curran Sewer System Capacity Evaluation Report (the "Capacity Report"), which was included in Appendix A – WWTP Supporting Information for the Final EIR, DSRSD owns and operates EALS, which conveys flows generated within the City to the regional WWTP. Under the 1992 agreement between the City and DSRSD, DSRSD is required to operate and maintain EALS, and the City is responsible to pay for these improvements, since they exclusively benefit service connections within the City.

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As noted in the Capacity Report, the City's 2007 Master Plan recognized that the EALS pump station is undersized for current flows and improvements are needed. Thus, the

current facilities already fail to meet industry standards, and the additional connections that will result from the Project and other development in the east Pleasanton area will exacerbate this existing problem. If annexation is a component of the Project, the EIR must evaluate the range of improvements that would be needed to address both the current and anticipated future deficiencies due to increased flows resulting from annexation.

The City has also noted the lack of this analysis. Specifically, in its comments on the Draft EIR (PLEASANTON-62), the City indicated Alternative 2 does not include sufficient detail to enable the City to rely on the Draft EIR to annex the Project into the City and approve the proposed development of the Project site. The City expressly requested that Alternative 2 include a discussion of whether this alternative would *"...require new or expanded wastewater treatment facilities and whether the LAVWMA has adequate capacity to serve projected demand in addition to their existing commitments..."*

The Final EIR does not include any substantive analysis in response to this comment. Indeed, the Final EIR's response to comment states "the commenter does not raise any project-related environmental issues under CEQA with respect to the scope or adequacy of the alternatives analysis. . . ." This statement is incorrect. Appendix G of the State CEQA Guidelines, Section XIX, subsections a and c, Utilities and Service Systems, suggests that a project will have a significant environmental impact if it would "require or result in . . . the construction of new or expanded wastewater treatment . . . facilities, the construction . . . of which could cause significant environmental effects", or if it would "result in a determination by the wastewater treatment provider which serves or may serve the project" that it lacks adequate capacity "to serve the project's projected demand in addition to the provider's existing commitments." As noted above, DSRSD and the City have both identified impacts to the EALS that will be needed to convey the additional flows from the Project and other development in the east Pleasanton area to the WWTP. The EIR must identify, analyze, and identify all feasible mitigation for these significant environmental impacts.

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The Final EIR's responses do not adequately address DSRSD's comments, which raise significant environmental impacts to the regional WWTP resulting from Arroyo Lago, the East Lakes Project, and other future development. The Final EIR's response merely cites the 1992 agreement between DSRSD and the City and states that flow from the Project "would not result in an exceedance of the 7.135 million gallons per day (mgd) Pleasanton 'Committed Flow' as defined in the cited Agreement for Wastewater Disposal Services of November 3, 1992 (sections 3 and 8(c))." The response goes on to state that "the 1992 Agreement would allow the proposed project flow to be treated at DSRSD facilities without further consultation."

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The response has misread DSRSD's 1992 Agreement with the City. Consistent with industry standards, the 1992 Agreement defines "Treatment Capacity" with reference to

Biological Oxygen Demand ("BOD5") and Total Suspended Solids ("TSS") in addition to flow. In other words, flow is just one component of "Treatment Capacity."

Here, the record contains no evidence to support the conclusion that the additional flow, BOD, and TSS generated by the Project in combination with other reasonably foreseeable future developments would not exceed the City's allocated capacity in the regional WWTP. Indeed, water conservation has had a major impact on the ratio of flows to solids that are received at the regional WWTP. Because of conservation and reduced per capita water use, flows to the WWTP have remained relatively constant even as growth has occurred, but solids have continued to increase. As these water use trends project into the future, solids are likely to be the constraint in treating future wastewater flows.

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Moreover, the 1992 Agreement clearly states that neither DSRSD or Pleasanton can take any action that would cause DSRSD to violate its National Pollution Discharge Elimination System ("NPDES") permits. Likewise, Appendix G suggests that the EIR should analyze whether the Project would "violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality". (State CEQA Guidelines, Appendix G, Hydrology and Water Quality, Section X, subd. (a).) Therefore, the additional contribution of wastewater from the Project and future developments needs to be analyzed to identify any potential impacts and mitigate them so as to assure DSRSD's continued compliance with Order R2-2022-0024 NPDES Permit CA0037613, Effluent Limitations. (For your convenience, a copy of this permit is enclosed with this letter.)

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Likewise, the impacts of the Project and related regional development on DSRSD's ability to comply with the San Francisco Bay Nutrients Watershed Permit, which was adopted by the San Francisco Regional Water Quality Board in July 2024, must be evaluated. (See, Third Nutrient Watershed Permit, Order R2-2024-0013 NPDES Permit CA0038873.) The EIR fails to analyze the nutrient impacts of the Project and related development that could be annexed into the City, and thus the EIR fails to identify how potential nutrient impacts of this cumulative development will be mitigated. The Nutrients Watershed Permit requires Bay area agencies discharging to San Francisco Bay to collectively reduce nutrients by 40% over the next 10 years, as compared to a 2022 baseline. Any additional flow from the Project and future developments in the area will impact nutrient loading at the WWTP. These impacts must be identified, evaluated, and mitigated to the extent it is feasible to do so. (Again, for your convenience, a copy of this permit is enclosed with this letter.)

10

Because the EIR has failed to analyze the annexation component of the Project and the potentially significant impacts to wastewater service, as outlined above, the EIR must be revised to include this information. The EIR should then be recirculated as required by Section 15088.5, subd. (a), of the State CEQA Guidelines.

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County of Alameda
July 21, 2025
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Each of the substantive defects discussed above is sufficient, standing alone, to preclude the County's certification of the EIR. The process the County is undertaking for this project is also invalid: it is procedurally inappropriate for the County to certify the EIR as "adequate" when (1) the County does not propose to approve the development of the Project, (2) the County will not be the land use authority with jurisdiction to approve the Project if the annexation proceeds, and (3) the EIR does not analyze the whole of the Project, including the impacts of annexation. These process flaws provide an additional basis that warrants reconsideration of the County's proposed course of action.

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CONT

Thank you for the opportunity to review the Final EIR. We appreciate your careful consideration of DSRSD's comments as part of this process. Should you have any questions about these comments, please feel free to contact me at (925) 875-2200 or jlee@dsrsd.com.

Sincerely,



JAN LEE

General Manager

Enc.: As indicated in text

cc: Douglas E. Coty, General Counsel, DSRSD
Jennifer T. Buckman, Special Counsel, DSRSD
Steve Delight, Engineering Director/District Engineer, DSRSD
Jackie Yee, Senior Engineer, DSRSD
Aubrey Rose, AICP, Planner, County of Alameda

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

1515 Clay Street, Suite 1400, Oakland, California 94612
waterboards.ca.gov/sanfranciscobay

**ORDER R2-2022-0024
NPDES PERMIT CA0037613**

The following Discharger is subject to the waste discharge requirements (WDRs) set forth in this Order:

Discharger **Dublin San Ramon Services District
Livermore-Amador Valley Water Management Agency
(LAVWMA)
East Bay Dischargers Authority (EBDA)**

Names of Facilities **Dublin San Ramon Services District Wastewater Treatment
Plant and collection system**

Facility Address **7399 Johnson Drive
Pleasanton, CA 94588
Alameda County**

Table 1. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North-South)	Discharge Point Longitude (East-West)	Receiving Water
001	Secondary Treated Municipal Wastewater, Zone 7 Reverse Osmosis Reject Water, and Cargill Brine	37.6944°	-122.1832°	Lower San Francisco Bay
003	Purified Water	37.6844°	-121.9153	Alamo Canal

This Order was adopted on: **July 13, 2022**
This Order shall become effective on: **September 1, 2022**
This Order shall expire on: **August 31, 2027**
CIWQS regulatory measure number: **448550**

The Discharger shall file a Report of Waste Discharge as an application for updated WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than **November 30, 2026**. The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) have classified this discharge as “**major**.”

Dublin San Ramon Services District
Dublin San Ramon Services District Wastewater Treatment Plant

Order R2-2022-0024
NPDES Permit CA0037613

I hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the Regional Water Board on the date indicated above.

Eileen White, Executive Officer

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1. FACILITY INFORMATION

Information describing the Dublin San Ramon Services District Wastewater Treatment Plant and wastewater collection system (collectively, the Facility) is summarized on the cover page and in Fact Sheet (Attachment F) sections 1 and 2. Fact Sheet section 1 also includes information regarding the permit application.

2. FINDINGS

The Regional Water Board finds the following:

- 2.1. Legal Authorities.** This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States as described in Table 1 subject to the WDRs in this Order.
- 2.2. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information the Discharger submitted as part of its application, information obtained through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through E, G, and H are also incorporated into this Order.
- 2.3. Notification of Interested Parties.** The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe these WDRs and has provided an opportunity to submit written comments and recommendations. Fact Sheet section 8.1 provides details regarding the notification.
- 2.4. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Fact Sheet section 8.3 provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order R2-2017-0017 (previous order), as amended by Orders R2-2016-0008, R2-2021-0019, and R2-2021-0028, is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous order.

3. DISCHARGE PROHIBITIONS

- 3.1. Discharge of treated or partially-treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- 3.2. Bypass of untreated or partially-treated wastewater to waters of the United States is prohibited, except as provided for in Attachment D section 1.7 of this Order.
- 3.3. Discharge at Discharge Point 001 is prohibited when treated wastewater does not receive an initial dilution of at least 75:1, as modeled. Upon EBDA's acceptance of Cargill brine in accordance with Order R2-2022-0023 (for the EBDA Common Outfall), discharge at Discharge Point 001 is prohibited when treated wastewater does not receive an initial dilution of at least 72:1, as modeled. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or part) is in good working order and is consistent with or can achieve better mixing than that described in Fact Sheet section 4.3.4.2 (Mixing Zone and Dilution Credits). The Discharger shall address measures taken to ensure this in its application for permit reissuance.
- 3.4. Total average dry weather flow in excess of 20.2 MGD is prohibited. This prohibition shall apply as follows: (1) average dry weather influent flow from the Dublin San Ramon Services District Wastewater Treatment Plant treatment units in excess of 17.0 MGD is prohibited, and (2) Zone 7 Water Agency reverse osmosis reject water in excess of 3.2 MGD is prohibited. Average dry weather influent flow from the treatment units shall be determined from three consecutive dry weather months (May 1 to October 31) each year. Compliance shall be evaluated based on flows measured at Monitoring Locations INF-002F, EFF-002F1, and EFF 002F2 as described in the Monitoring and Reporting Program (MRP) (Attachment E).

Upon satisfying Provision 6.3.5.4, the average dry weather influent flow from the treatment units may be increased from 17.0 MGD to 20.7 MGD, and the total average dry weather flow may be increased from 20.2 MGD to 23.9 MGD.

- 3.5. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.
- 3.6. Upon satisfaction of Provision 6.3.5.1 (Purified Water Pilot Project), discharge at Discharge Point 003 is prohibited unless wastewater is purified as described in Fact Sheet section 2.1.3.3 (Wastewater Treatment, LAVWMA) and does not exceed 0.5 MGD. Compliance shall be evaluated based on flows measured at Monitoring Location EFF-002F3 as described in the MRP.

4. EFFLUENT LIMITATIONS

- 4.1. **Effluent Limitations.** The Discharger shall comply with the following effluent limitations at the treatment plant and at Discharge Point 001 (EBDA Common

Outfall), with compliance measured at Monitoring Locations EFF-001, EFF-002F1, EFF-002F2, and EFF-002F3 as described in the MRP:

Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Monitoring Location
Carbonaceous Biochemical Oxygen Demand 5-day @ 20°C	mg/L	25	40	-	-	-	EFF-002F1
Total Suspended Solids	mg/L	30	45	-	-	-	EFF-002F1
pH ^[1]	standard units	-	-	-	6.0	9.0	EFF-002F2
Chlorine, Total Residual	mg/L	-	-	-	-	0.0 ^[2]	EFF-002F3
Chlorine, Total Residual	mg/L	-	-	-	-	0.0 ^[3,4]	EFF-001
Ammonia, Total	mg/L as N	86 ^[5]	-	110 ^[5]	-	-	EFF-001
Copper, Total Recoverable	µg/L	53	-	69	-	-	EFF-001
Cyanide, Total	µg/L	20	-	40	-	-	EFF-001
Dioxin-TEQ	µg/L	1.4 x 10 ⁻⁸	-	2.8 x 10 ⁻⁸	-	-	EFF-001

Footnotes:

- ^[1] If the Discharger monitors pH continuously, pursuant to 40 C.F.R. section 401.17 the Discharger shall be in compliance with this pH limitation provided that both of the following conditions are satisfied: (i) the total time during which the pH is outside the required range shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the required pH range shall exceed 60 minutes.
- ^[2] This instantaneous maximum total residual chlorine effluent limitation shall be replaced by a one-hour average effluent limitation of 0.019 mg/L on the first day of the month following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031.
- ^[3] This instantaneous maximum total residual chlorine effluent limitation shall be replaced by a one-hour average effluent limitation of 0.98 mg/L on the first day of the month following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031.
- ^[4] This limitation shall be replaced by a one-hour average effluent limitation of 0.94 mg/L on the first day of the month following the latter of (1) EBDA's acceptance of Cargill brine in accordance with Order R2-2022-0023 and (2) U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031.
- ^[5] On the first day of the month following EBDA's acceptance of Cargill brine in accordance with Order R2-2022-0023, the effluent limitations for total ammonia shall be replaced by an average monthly effluent limitation of 83 mg/L and a maximum daily effluent limitation of 100 mg/L.

4.2. Percent Removal. The average monthly percent removal of carbonaceous biochemical oxygen demand (CBOD) and total suspended solids (TSS) at each individual treatment plant shall not be less than 85 percent (i.e., in each calendar month, the arithmetic mean of CBOD and TSS, by concentration, of effluent samples collected at Monitoring Location EFF-002F1, as described in the MRP, shall not exceed 15 percent of the arithmetic mean of the CBOD and TSS, by concentration, for influent samples collected at Monitoring Location INF-002F, as described in the MRP, at approximately the same times during the same period).

4.3. Enterococcus Bacteria. The discharge at Discharge Point 001 shall meet the following enterococcus effluent limitations, with compliance measured at Monitoring Location EFF-001D, as described in the MRP:

- 4.3.1. The six-week rolling geometric mean of enterococcus bacteria shall not exceed 280 colony forming units per 100 milliliters (CFU/100 mL). Compliance with this limit shall be determined weekly by calculating the geometric mean of all enterococcus bacteria sample results from the past six weeks.
- 4.3.2. No more than 10 percent of all enterococcus bacteria samples collected in a calendar month shall exceed 1,100 CFU/100 mL. Compliance with this limit shall be determined based on measured sample results. The Discharger shall not report interpolated results. If the Discharger has 9 or fewer sample results in a calendar month, compliance shall be based on the highest result. If the Discharger has 10 to 19 sample results, compliance shall be based on the second highest result, and so on.

4.4. Fecal Coliform Bacteria. The discharge at Discharge Point 001 shall meet the following fecal coliform bacteria limitations, with compliance measured at Monitoring Location EFF-001D, as described in the MRP:

- 4.4.1. The geometric mean value of all fecal coliform bacteria samples in a calendar month shall not exceed 500 most probable number per 100 milliliters (MPN/100 mL), and
- 4.4.2. The 11-sample 90th percentile value of fecal coliform bacteria samples shall not exceed 1,100 MPN/100 mL. Compliance with this limit shall be based on the second highest result.

4.5. Acute Toxicity. The discharge at Discharge Point 001 shall meet the following acute toxicity effluent limitation, with compliance measured at Monitoring Location EFF-001 as described in the MRP. If the Discharger can demonstrate that toxicity exceeding this acute toxicity limit is caused solely by ammonia and that the ammonia in the discharge complies with the ammonia effluent limits in Table 2 of this Order, then such toxicity shall not constitute a violation of this acute toxicity limit.

- 4.5.1. The three-sample median shall not exhibit less than 90 percent survival (i.e., a bioassay test showing survival of less than 90 percent shall represent a violation of this effluent limit if one or more of the past two or fewer bioassay tests show less than 90 percent survival).
- 4.5.2. The single-sample value shall not exhibit less than 70 percent survival (i.e., a bioassay test showing survival of less than 70 percent shall represent a violation of this effluent limitation).

5. RECEIVING WATER LIMITATIONS

5.1. The discharge shall not cause the following conditions at any place in receiving waters:

- 5.1.1. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;
- 5.1.2. Alteration of suspended sediment in such a manner as to cause nuisance or adversely affect beneficial uses or detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;
- 5.1.3. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;
- 5.1.4. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
- 5.1.5. Alteration of temperature beyond present natural background levels unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses;
- 5.1.6. Changes in turbidity that cause nuisance or adversely affect beneficial uses, or increases from normal background light penetration or turbidity greater than 10 percent in areas where natural turbidity is greater than 50 nephelometric turbidity units, or above 55 nephelometric turbidity units in areas where natural turbidity is less than or equal to 50 nephelometric turbidity units;
- 5.1.7. Coloration that causes nuisance or adversely affects beneficial uses;
- 5.1.8. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or
- 5.1.9. Toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

5.2. The discharge shall not cause the following limits to be exceeded at any place in receiving waters within one foot of the water surface:

- 5.2.1. Dissolved Oxygen 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified

above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations

5.2.2. Dissolved Sulfide Natural background levels

5.2.3. pH The pH shall not be depressed below 6.5 nor raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.

5.2.4. Nutrients Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

5.3. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder beyond any mixing zone established through this Order. If more stringent water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.

6. PROVISIONS

6.1. Standard Provisions

6.1.1. The Discharger shall comply with all “Standard Provisions” in Attachment D.

6.1.2. The Discharger shall comply with all applicable provisions of the “Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits” in Attachment G.

6.1.3. If there is any conflict, duplication, or overlap between provisions in this Order, the more stringent provision shall apply.

6.2. Monitoring and Reporting Provisions

The Discharger shall comply with the Monitoring and Reporting Program (MRP, Attachment E) and future revisions thereto, and applicable monitoring and reporting requirements in Attachments D and G. Notwithstanding Provision 6.1.3, the MRP in Attachment E shall apply over any more stringent, conflicting, duplicative, or overlapping requirement in Attachments D and G.

6.3. Special Provisions

6.3.1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law or as otherwise authorized by law. The Discharger may request a permit modification based on any of these circumstances. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses as necessary.

- 6.3.1.1. If present or future investigations demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters;
- 6.3.1.2. If new or revised water quality objectives or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality objectives or wasteload allocations. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally-adopted water quality objectives or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications;
- 6.3.1.3. If translator, dilution, or other water quality studies provide a basis for determining that a permit condition should be modified;
- 6.3.1.4. If a State Water Board precedential decision, new policy, new law, or new regulation is adopted;
- 6.3.1.5. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge; or
- 6.3.1.6. If the Discharger requests adjustments in effluent limits due to the implementation of stormwater diversion pursuant to the Municipal Regional Stormwater Permit (NPDES Permit CAS612008) for redirecting dry weather and first flush discharges from a storm drain system to the sanitary sewer system as a stormwater pollutant control strategy.

6.3.2. Effluent Characterization Study and Report

- 6.3.2.1. **Study Elements.** The Discharger shall characterize and evaluate the discharge from Discharge Point 001 as required by the MRP to verify that the reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. If concentrations of any of the priority pollutants listed in Attachment G, Table B, significantly increase over past

performance, the Discharger shall investigate the cause of any such increase. The investigation may include, but need not be limited to, an increase in monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an exceedance of applicable water quality objectives. This requirement may be satisfied through identification of the constituent as a “pollutant of concern” in the Discharger’s Pollutant Minimization Program, described in Provision 6.3.3.

6.3.2.2. **Reporting Requirements**

- 6.3.2.2.1. **Routine Reporting.** The Discharger shall report the pollutants detected at or above applicable water quality objectives (see Fact Sheet Table F-8 for the objectives) in the transmittal letter for the self-monitoring report associated with the month in which samples were collected. This requirement does not apply to pollutants with effluent limitations (see Table 2 of this Order).
- 6.3.2.2.2. **Annual Reporting.** The Discharger shall summarize the annual data evaluation and source investigation in the annual self-monitoring report described in MRP section 9.2.2.2.

6.3.3. **Pollutant Minimization Program**

- 6.3.3.1. The Discharger shall continue to improve its existing Pollutant Minimization Program to promote minimization of pollutant loadings to the treatment plant and therefore to the receiving waters.
- 6.3.3.2. The Discharger shall submit an annual report no later than **February 28** of each calendar year. Each annual report shall include at least the following information:
 - 6.3.3.2.1. **Brief description of treatment plant.** The description shall include the service area and treatment plant processes.
 - 6.3.3.2.2. **Discussion of current pollutants of concern.** Periodically, the Discharger shall analyze its circumstances to determine which pollutants are currently a problem and which pollutants may be potential future problems. This discussion shall include the reasons for choosing the pollutants.
 - 6.3.3.2.3. **Identification of sources for pollutants of concern.** This discussion shall include how the Discharger intends to estimate and identify pollutant sources. The Discharger shall include sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.

- 6.3.3.2.4. **Identification of tasks to reduce the sources of pollutants of concern.** This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks by itself or participate in group, regional, or national tasks that address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that address its pollutants of concern whenever it is efficient and appropriate to do so. An implementation timeline shall be included for each task.
- 6.3.3.2.5. **Outreach to employees.** The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the Facility. The Discharger may provide a forum for employees to provide input.
- 6.3.3.2.6. **Continuation of Public Outreach Program.** The Discharger shall prepare a pollution prevention public outreach program for its service area. Outreach may include participation in existing community events, such as county fairs; initiating new community events, such as displays and contests during Pollution Prevention Week; conducting school outreach programs; conducting plant tours; and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, or web sites. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.
- 6.3.3.2.7. **Discussion of criteria used to measure Pollutant Minimization Program and task effectiveness.** The Discharger shall establish criteria to evaluate the effectiveness of its Pollutant Minimization Program. This discussion shall identify the specific criteria used to measure the effectiveness of each task in Provisions 6.3.3.2.3, 6.3.3.2.4, 6.3.3.2.5, and 6.3.3.2.6.
- 6.3.3.2.8. **Documentation of efforts and progress.** This discussion shall detail all of the Discharger's Pollutant Minimization Program activities during the reporting year.
- 6.3.3.2.9. **Evaluation of Pollutant Minimization Program and task effectiveness.** The Discharger shall use the criteria established in Provision 6.3.3.2.7 to evaluate the program and task effectiveness.
- 6.3.3.2.10. **Identification of specific tasks and timelines for future efforts.** Based on the evaluation, the Discharger shall explain how it intends to continue or change its tasks to more effectively reduce the amount of pollutants flowing to the treatment plant, and subsequently in its effluent.
- 6.3.3.3. The Discharger shall develop and conduct a Pollutant Minimization Program as described below when there is evidence that a priority pollutant is present

in the effluent above an effluent limitation (e.g., sample results reported as detected but not quantified [DNQ] when the effluent limitation is less than the method detection limit [MDL], sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) and either:

- 6.3.3.3.1. A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
- 6.3.3.3.2. A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the MRP.
- 6.3.3.4. If triggered for a reason set forth in Provision 6.3.3.3, above, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals:
 - 6.3.3.4.1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutants, which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures when source monitoring is unlikely to produce useful analytical data;
 - 6.3.3.4.2. Quarterly monitoring for the reportable priority pollutants in the influent to the wastewater treatment system. The Executive Officer may approve alternative measures when influent monitoring is unlikely to produce useful analytical data;
 - 6.3.3.4.3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutants in the effluent at or below the effluent limitation;
 - 6.3.3.4.4. Implementation of appropriate cost-effective control measures for the reportable priority pollutants, consistent with the control strategy; and
 - 6.3.3.4.5. Inclusion of the following specific items within the annual report required by Provision 6.3.3.2, above:
 - 6.3.3.4.5.1. All Pollutant Minimization Program monitoring results for the previous year;
 - 6.3.3.4.5.2. List of potential sources of the reportable priority pollutants;
 - 6.3.3.4.5.3. Summary of all actions undertaken pursuant to the control strategy; and
 - 6.3.3.4.5.4. Description of actions to be taken in the following year.

6.3.4. **Special Provisions for Publicly-Owned Treatment Works**

6.3.4.1. **Pretreatment Program.** The Discharger shall implement and enforce its approved pretreatment program in accordance with federal pretreatment regulations (40 C.F.R. part 403); pretreatment standards promulgated under CWA sections 307(b), 307(c), and 307(d); pretreatment requirements specified under 40 C.F.R. section 122.44(j); and the requirements in Attachment H, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to, the following:

- 6.3.4.1.1. Enforcement of the National Pretreatment Standards of 40 C.F.R. sections 403.5 and 403.6;
- 6.3.4.1.2. Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the National Pretreatment Program (40 C.F.R. part 403);
- 6.3.4.1.3. Submission of reports to the State Water Board and the Regional Water Board as described in Attachment H; and
- 6.3.4.1.4. Evaluation of the need to revise local limits under 40 C.F.R. section 403.5(c)(1) and, by July 1, 2023, submission of a report describing the changes, with a plan and schedule for implementation.

6.3.4.2. **Sludge and Biosolids Management**

- 6.3.4.2.1. Sludge and biosolids treatment and storage shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.
- 6.3.4.2.2. The sludge and biosolids treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect site boundaries from erosion, and to prevent conditions that would cause drainage from the stored materials. Adequate protection is defined as protection from at least a 100-year storm and the highest possible tidal stage that may occur.
- 6.3.4.2.3. This Order does not authorize permanent onsite sludge or biosolids storage or disposal.

6.3.4.3. **Collection System Management.** The Discharger shall properly operate and maintain its collection system (see Attachments D and G, section 1.4), report any noncompliance with respect to its collection system (see Attachment D, section 5.5.1, and Attachment G, sections 5.5.1 and 5.5.2), and mitigate any discharges in violation of this Order associated with its collection system (see Attachments D and G, section 1.3).

State Water Board Order 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC (statewide WDRs), contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. The statewide WDRs clearly and specifically stipulate requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementing the requirements for operation and maintenance and mitigation of sanitary sewer overflows set forth in the statewide WDRs (and any subsequent order updating these requirements) shall satisfy the corresponding federal NPDES requirements specified in Attachments D and G of this Order for the collection systems. Following the reporting requirements set forth in the statewide WDRs (and any subsequent order updating those requirements) shall satisfy the NPDES reporting requirements for sanitary sewer overflows specified in Attachments D and G.

- 6.3.4.4. **Resource Recovery from Anaerobically Digestible Material.** If the Discharger receives hauled-in anaerobically-digestible material for injection into an anaerobic digester, the Discharger shall notify the Regional Water Board and develop and implement Standard Operating Procedures for this activity. The Standard Operating Procedures shall be developed prior to initiation of hauling. The Standard Operating Procedures shall address material handling, including unloading, screening, or other processing prior to anaerobic digestion; transportation; spill prevention; spill response; avoidance of the introduction of materials that could cause interference, pass through, or upset of the treatment processes; avoidance of prohibited material; vector control; odor control; operation and maintenance; and the disposition of any solid waste segregated from introduction to the digester. The Discharger shall train its staff on the Standard Operating Procedures and maintain records for a minimum of three years for each load received, describing the hauler, waste type, and quantity received. In addition, the Discharger shall maintain records for a minimum of three years for the disposition, location, and quantity of cumulative pre-digestion segregated solid waste hauled offsite.

6.3.5. **Other Special Provisions**

- 6.3.5.1. **Purified Water Pilot Project.** The Discharger shall submit the following items before it commences discharge of purified water from Discharge Point 003:
- 6.3.5.1.1. Documentation that the reliability, capability, and performance of the purified water treatment facilities will maintain compliance with this Order;

- 6.3.5.1.2. A letter stamped by a licensed professional engineer that the purified water treatment facilities have been constructed as designed and are ready for use;
- 6.3.5.1.3. Demonstration of compliance with all applicable provisions of the California Environmental Quality Act (California Public Resources Code Division 13, Chapter 3, section 21100 et seq.);
- 6.3.5.1.4. Updates or an addendum to the Contingency Plan and Operations and Maintenance Manual required by Attachment G sections 1.3.1 and 1.4.1 to include the purified water treatment facilities;
- 6.3.5.1.5. Notification, at least 30 days prior, of the specific date the Discharger proposes to commence discharging purified water from Discharge Point 003.
- 6.3.5.2. **Copper Action Plan.** The Discharger shall implement pretreatment, source control and pollution prevention for copper in accordance with the following tasks and time schedule:

Table 3. Copper Action Plan

Task No.	Task	Deadline
1	Implement Copper Control Program. Continue implementing existing program to reduce identified copper sources.	Implementation shall be ongoing
2	Implement Additional Actions. If the Regional Water Board notifies the Discharger that the three-year rolling mean dissolved copper concentration in Central San Francisco Bay exceeds 2.2 µg/L, then within 90 days of the notification, evaluate the effluent copper concentration trend and, if it is increasing, develop and begin implementation of additional measures to control copper discharges. Report the conclusion of the trend analysis and provide a schedule for any new actions to be taken within the next 12 months.	With next annual pollution minimization program report due February 28 (at least 90 days following notification)
3	Report Status. Submit an annual report documenting copper control program implementation that evaluates the effectiveness of the actions taken, including any additional actions required by Task 2 above, and provides a schedule for actions to be taken within the next 12 months.	Annually, with annual pollution minimization program report due February 28 each year

- 6.3.5.3. **Cyanide Action Plan.** The Discharger shall implement monitoring and surveillance, pretreatment, source control, and pollution prevention for cyanide in accordance with the following tasks and time schedule:

Table 4. Cyanide Action Plan

Task No.	Task	Deadline
1	Review Potential Cyanide Sources. Submit an up-to-date inventory of potential cyanide sources. If no cyanide source is identified, Tasks 2 and 3, below, are not required unless the Discharger receives a request to discharge detectable levels of cyanide to the sewer. In such case, notify the Executive Officer and implement Tasks 2 and 3.	With annual pollution minimization program report due February 28, 2023
2	Implement Cyanide Control Program. Implement a control program to minimize cyanide discharges consisting, at a minimum, of the following elements: a. Inspect each potential source to assess the need to include that source in the control program. b. Inspect sources included in the control program annually. Inspection elements may be based on U.S. EPA guidance, such as <i>Industrial User Inspection and Sampling Manual for POTWs</i> (EPA 831 B 94 01). c. Develop and distribute educational materials regarding the need to prevent cyanide discharges to sources included in the control program. d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. If the plant influent cyanide concentration exceeds 17 µg/L, the Discharger shall collect a follow-up sample within 5 days of becoming aware of the laboratory results. If the results of the follow-up sample also exceed 17 µg/L, then a “significant cyanide discharge” is occurring.	Implementation shall be ongoing following Executive Officer notification under Task 1
3	Implement Additional Measures. If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations are 1.0 µg/L or higher in the main body of San Francisco Bay, then within 90 days of the notification, commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations, report on the progress and effectiveness of the actions taken, and provide a schedule for actions to be taken within the next 12 months.	With next annual pollution minimization program report due February 28 (at least 90 days following notification)
4	Report Status of Cyanide Control Program. Submit an annual report documenting cyanide control program implementation and addressing the effectiveness of actions taken, including any additional cyanide controls required by Task 3, above, and provide a schedule for actions to be taken within the next 12 months.	Annually, with annual pollution minimization program report due February 28 each year

6.3.5.4. **Flow Capacity Increase.** When the Discharger completes proposed upgrades to its wastewater treatment plant (see Fact Sheet section 2.6), it shall submit the following documentation prior to increasing its average dry weather influent flow capacity from 17.0 MGD to 20.7 MGD:

6.3.5.4.1. Certification by a licensed engineer affirming that the upgrades have been constructed as designed and that the reliability, capability, and performance of the wastewater facility upgrades will maintain compliance with this Order. Hydraulic and organic loading capacities of the treatment

facilities shall be evaluated by appropriate combinations of desk-top analyses and treatment process stress testing to simulate design peak loading conditions. The evaluation shall include treatment process operations under both dry weather and wet weather design flow conditions and effluent disposal capacity including storage and any discharge to land through reclamation;

- 6.3.5.4.2. Demonstration of compliance with all applicable provisions of the California Environmental Quality Act (California Public Resources Code Division 13, Chapter 3, section 21100 et seq.);
- 6.3.5.4.3. Updates to the Contingency Plan and Operations and Maintenance Manual required by Attachment G sections 1.3.1 and 1.4.1 to include the facility upgrades; and
- 6.3.5.4.4. Notification, at least 30 days prior, of the specific date the Discharger proposes to commence its increased average dry weather flow.

ATTACHMENT A – DEFINITIONS AND ABBREVIATIONS

DEFINITIONS

Arithmetic Mean (μ)

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

$$\text{Arithmetic mean} = \mu = \Sigma x / n$$

where: Σx is the sum of the measured ambient water concentrations,
and n is the number of samples

Average Monthly Effluent Limitation (AMEL)

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

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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

Carcinogenic

Known to cause cancer in living organisms.

Coefficient of Variation (CV)

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

Daily Discharge

Either: (1) the total mass of a constituent discharged over a calendar day (12:00 a.m. through 11:59 p.m.) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit) for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of a constituent over a day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

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

For mass emission calculations using a DNQ value, the DNQ value is multiplied by flow.

Dilution Credit

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

Effluent Concentration Allowance (ECA)

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

Enclosed Bays

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

Estimated Chemical Concentration

Concentration that results from the confirmed detection of a substance below the ML by the analytical method.

Estuaries

Waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters are considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220; Suisun Bay; Carquinez Strait downstream to the Carquinez

Bridge; and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters

All surface waters of the state that are not the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

Highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

Lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)

Highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

Middle measurement in a data set. The median of a data set is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2+1)})/2$ (i.e., the midpoint between $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

Minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Appendix B.

Minimum Level (ML)

Concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone

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

Not Detected (ND)

Sample results less than the laboratory's MDL.

For mass emission calculations using an ND value, half the ND value is multiplied by flow.

Persistent Pollutants

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

Pollutant Minimization Program

Program of waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of a Pollutant Minimization Program is to reduce all potential sources of a priority pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. Cost effectiveness may be considered when establishing the requirements of a Pollutant Minimization Program. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), is considered to fulfill the Pollutant Minimization Program requirements.

Pollution Prevention

Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board or Regional Water Board.

Reporting Level (RL)

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

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)

Measure of variability calculated as follows:

$$\text{Standard deviation} = \sigma = (\Sigma[(x - \mu)^2]/(n - 1))^{0.5}$$

where: x is the observed value

μ is the arithmetic mean of the observed values

n is the number of samples

Toxicity Reduction Evaluation (TRE)

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

ABBREVIATIONS

%	Percent
µg/L	Micrograms per liter
1/Blending Event	Once per blending event
1/Day	Once per day
1/Month	Once per month
1/Quarter	Once per quarter
1/Week	Once per week
1/Year	Once per year
2/Month	Two times per month
2/Week	Twice per week
2/Year	Twice per year
3/Week	Three times per week
4/Week	Four times per week
5/Week	Five times per week
AMEL	Average monthly effluent limitation

AWEL	Average weekly effluent limitation
B	Background concentration
C	Water quality criterion or objective
C-24	24-hour composite
CFU/100 mL	Colony forming units per 100 milliliters
Continuous	Measured continuously
Continuous/D	Measured continuously, and recorded and reported daily
Continuous/H	Measured continuously, and recorded and reported hourly
CV	Coefficient of Variation
DNQ	Detected, but not quantified
DL	Detection level
ECA	Effluent Concentration Allowance
Grab	Grab sample
MDEL	Maximum Daily Effluent Limitation
MDL	Method detection limit
MEC	Maximum effluent concentration
MG	Million gallons
mg/L	Milligrams per liter
mg/L as N	Milligrams per liter as nitrogen
MGD	Million gallons per day
ML	Minimum level
MPN/100 mL	Most probable number per 100 milliliters
ND	Not detected
NTU	Nephelometric turbidity units
RL	Reporting level
RPA	Reasonable potential analysis
s.u.	Standard pH units
TIE	Toxicity identification evaluation
TRE	Toxicity reduction evaluation
TUa	Acute toxicity units
TUc	Chronic toxicity units

ATTACHMENT B – MAPS

Figure B-1. Overview Map of Discharge System

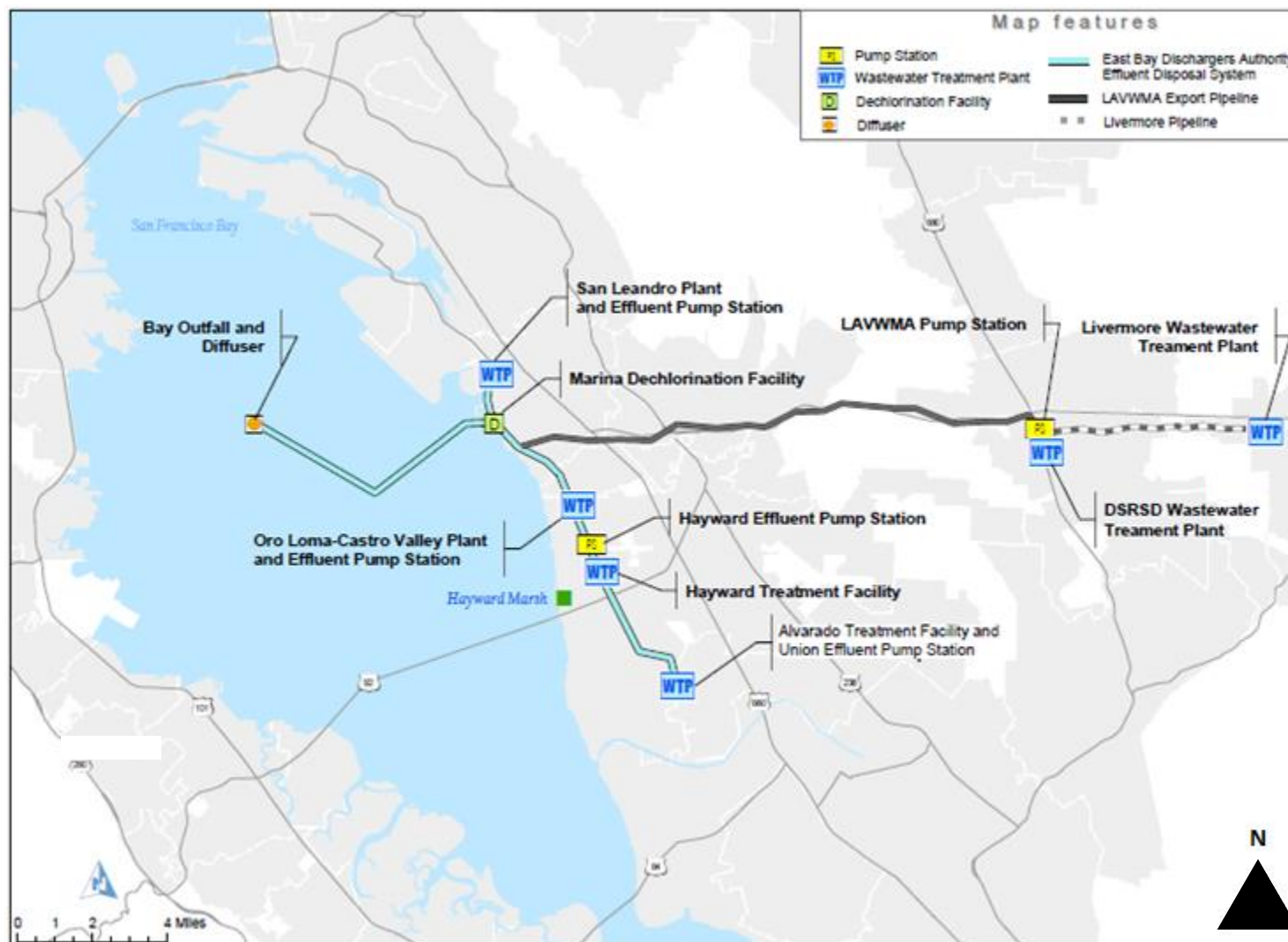


Figure B-2. Overview Map of Treatment Plant

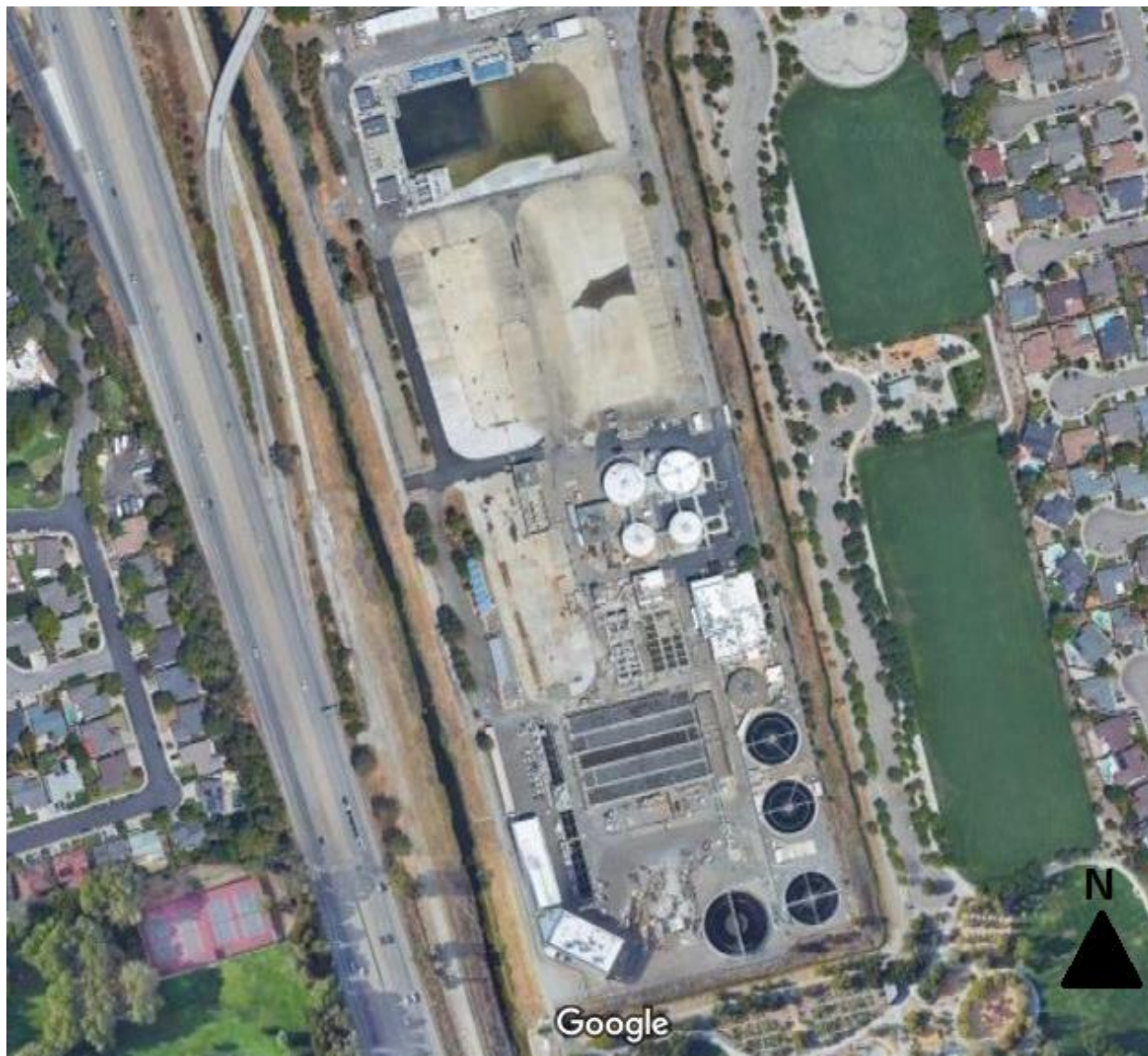


Figure B-3. Overview Map of Solids Treatment Site ^[1]



Footnote:

^[1] The sludge lagoons and dedicated land disposal site are located approximately 500 feet northeast of the treatment plant.

Figure C-1. Process Flow Diagram: Liquids Treatment

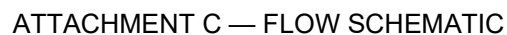


Figure C-2. Process Flow Diagram: Solids Treatment

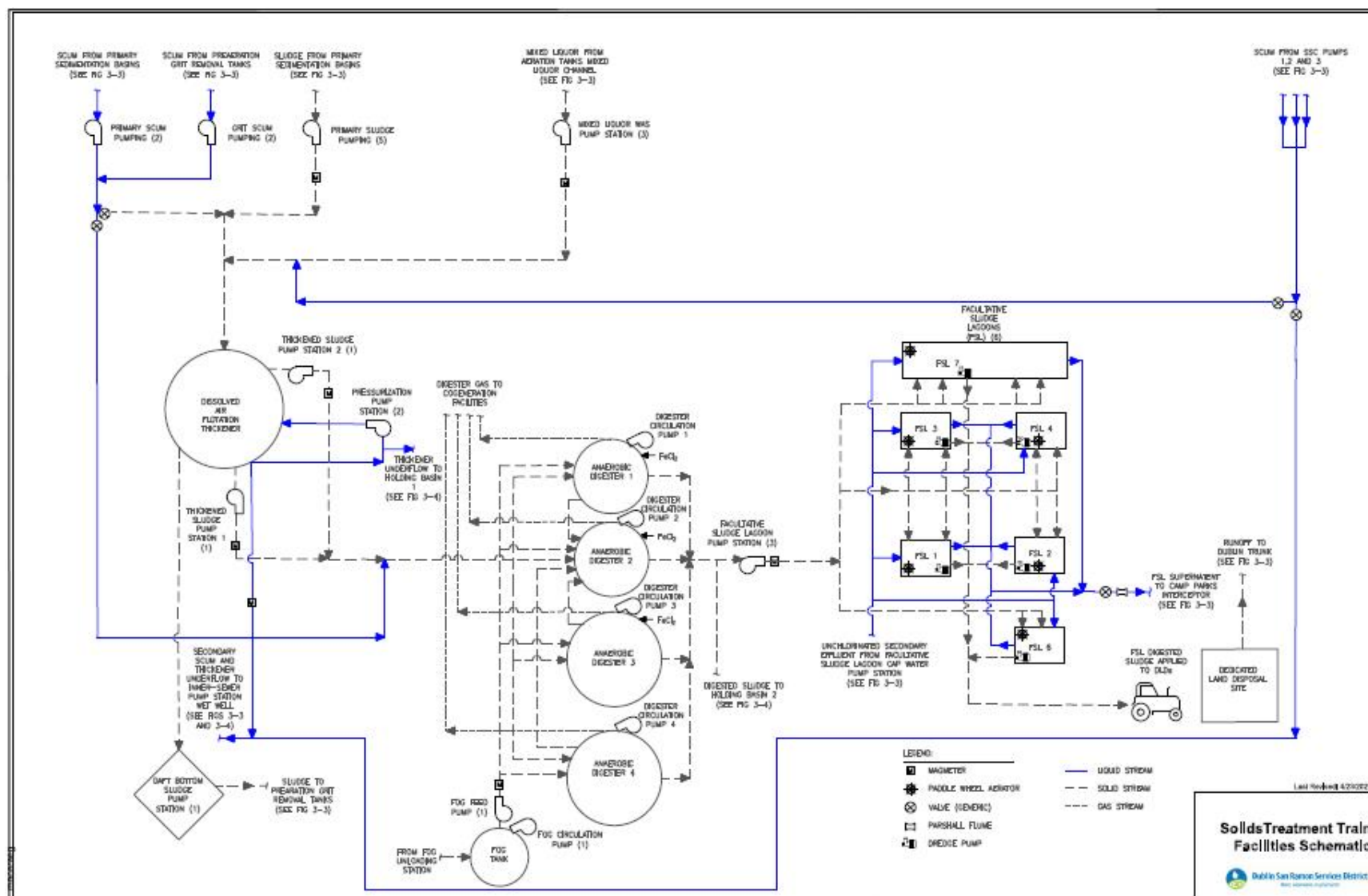
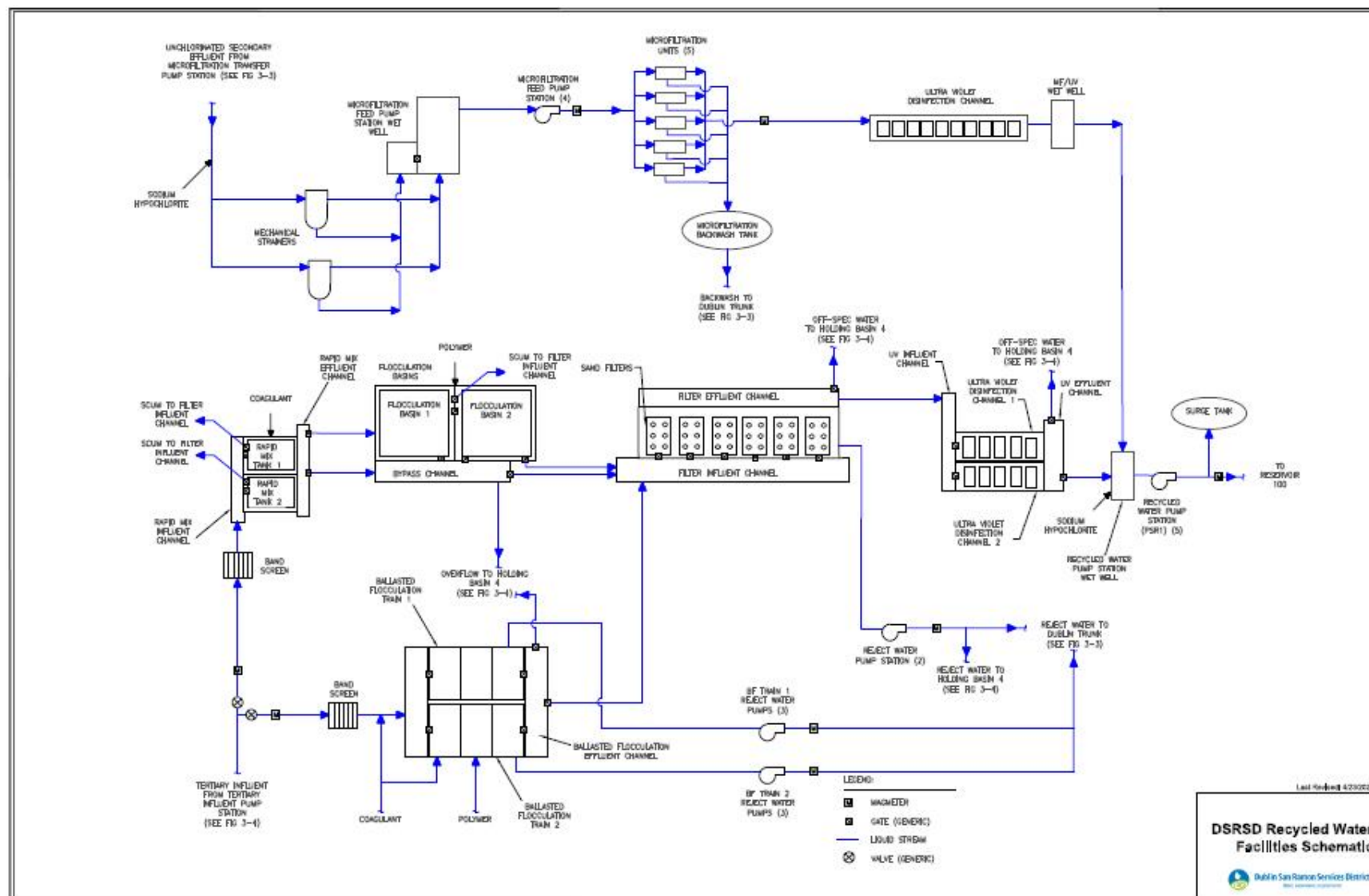


Figure C-3. Process Flow Diagram: Recycled Water Treatment



ATTACHMENT D – STANDARD PROVISIONS

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ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

- 1.1.1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
- 1.1.2. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

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

1.4. Proper Operation and Maintenance. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

1.5. Property Rights

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

1.6. Inspection and Entry. The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

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

1.7. Bypass

1.7.1. Definitions

- 1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
- 1.7.1.2. "Severe property damage" means substantial physical damage to property; damage to the treatment facilities, which causes them to become inoperable; or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
- 1.7.2. **Bypass not exceeding limitations.** The Discharger may allow any bypass to occur that does not cause exceedances of effluent limitations, but only if it is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance sections 1.7.3, 1.7.4, and 1.7.5 below. (40 C.F.R. § 122.41(m)(2).)

1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

- 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - 1.7.3.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - 1.7.3.3. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance section 1.7.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
- 1.7.4. **Approval.** The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance section 1.7.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

1.7.5. **Notice**

- 1.7.5.1. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)
- 1.7.5.2. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions – Reporting section 5.5 below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii).)

1.8. **Upset.** Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error,

improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

- 1.8.1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance section 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
- 1.8.2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - 1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - 1.8.2.2. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - 1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting section 5.5.2.2 below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - 1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance section 1.3 above. (40 C.F.R. § 122.41(n)(3)(iv).)
- 1.8.3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

- 2.1. **General.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)
- 2.2. **Duty to Reapply.** If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

- 2.3. Transfers.** This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

- 3.1.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- 3.2.** Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
- 3.2.1.** The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
- 3.2.2.** The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N, for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

- 4.1.** The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

- 4.3.1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
- 4.3.2. Permit applications and attachments, permits, and effluent data. (40 C.F.R. § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information. The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information that the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

- 5.2.1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting sections 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 C.F.R. § 122.41(k).)
- 5.2.2. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (2) the

manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to ensure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

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

For a municipal, state, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).)

- 5.2.3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting section 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- 5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting section 5.2.2 above (40 C.F.R. § 122.22(b)(1));
 - 5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - 5.2.3.3. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
- 5.2.4. If an authorization under Standard Provisions – Reporting section 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting section 5.2.3 above must be

submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

- 5.2.5. Any person signing a document under Standard Provisions – Reporting section 5.2.2 or 5.2.3 above shall make the following certification:

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

- 5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – Reporting sections 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting section 5.2, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
- 5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. All reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)
- 5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

- 5.3.4. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

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

5.5. Twenty-Four Hour Reporting

- 5.5.1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2025, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

- 5.5.2. The following shall be included as information that must be reported within 24 hours:
- 5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
- 5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

5.5.3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

5.6. Planned Changes. The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order unless the discharge is an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a). (40 C.F.R. § 122.41(l)(1)(ii).) If the discharge is an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions – Notification Levels section 7.1.1). (40 C.F.R. § 122.41(l)(1)(ii).)

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

5.8. Other Noncompliance. The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting sections 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting section 5.5 above. For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting section 5.5 and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

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

5.10. Initial Recipient for Electronic Reporting Data. The owner, operator, or duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this list. (40 C.F.R. § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, Water Code sections 13268, 13385, 13386, and 13387.

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Non-Municipal Facilities. Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

7.1.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(1)):

7.1.1.1. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

7.1.1.2. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4 dinitrophenol and 2-methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

7.1.1.3. Five (5) times the maximum concentration reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

7.1.1.4. The level established by the Regional Water Board in accordance with 40 C.F.R. section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

7.1.2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(2)):

7.1.2.1. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

7.1.2.2. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

- 7.1.2.3. Ten (10) times the maximum concentration reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
- 7.1.2.4. The level established by the Regional Water Board in accordance with 40 C.F.R. section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

7.2 Publicly Owned Treatment Works (POTWs)

- 7.2.1. All POTWs shall provide adequate notice to the Regional Water Board of any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA sections 301 or 306 if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)).
- 7.2.2. All POTWs shall provide adequate notice to the Regional Water Board of any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 C.F.R. § 122.42(b)(2).)
- 7.2.3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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

1. GENERAL MONITORING PROVISIONS

- 1.1. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. section 122.63. If any discrepancies exist between this MRP and the “Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits” (Attachment G), this MRP shall prevail.
- 1.2. The Discharger shall conduct all monitoring in accordance with Attachment D section 3, as supplemented by Attachment G. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. section 136 and must be specified in this permit.
- 1.3. For the analysis of monitoring samples, the Discharger shall use laboratories certified by the State Water Resources Control Board (State Water Board) in accordance with Water Code section 13176 and shall obtain quality assurance/quality control data with laboratory reports. For any onsite field tests (e.g., turbidity, pH, temperature, dissolved oxygen, conductivity, disinfectant residual) analyzed by a noncertified laboratory, the Discharger shall implement a Quality Assurance-Quality Control Program. The Discharger shall keep a manual onsite containing the steps followed in this program and shall demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.
- 1.4. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board;
Quality Assurance Program Officer;
Office of Information Management and Analysis;
1001 I Street
Sacramento, CA 95814

2. MONITORING LOCATIONS

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

Table E-1. Monitoring Locations

Sample Type	Monitoring Location	Monitoring Location Description
Influent	INF-002F	A point in the treatment plant headworks at which all waste tributary to the treatment system is present and preceding any phase of treatment.
Effluent (EBDA Common Outfall)	EFF-001	A point in the EBDA Common Outfall between the point of discharge and the point at which all waste tributary to the outfall is present and completely mixed. This location may be the same as Monitoring Location EFF-001D.
Effluent (EBDA Common Outfall)	EFF-001D	A point in the disinfection system at which adequate contact with the disinfectant has occurred. This location may be the same as Monitoring Location EFF-001.
Effluent	EFF-002F1	A point in the treatment plant at which adequate disinfection has taken place and prior to the addition of Zone 7 reject water.
Effluent	EFF-002F2	A point in the treatment plant at which adequate disinfection has taken place just prior to where the Dublin San Ramon Services District transfers control of its effluent to the LAVWMA facilities.
Effluent	EFF-002F3	A point at which purified water treatment has taken place and just prior to discharge to Alamo Canal.
Biosolids	BIO-002F	A point following onsite biosolids processing.
Recycled Water	REC-002F	A point after full treatment, including disinfection, that represents all wastewater directed offsite for recycled water distribution and thus not discharged to Lower San Francisco Bay.

3. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor individual treatment plant influent at Monitoring Location INF-002F as follows:

Table E-2. Influent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MG/MGD	Continuous	Continuous/D
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C) (CBOD) ^[2]	mg/L	C-24	1/Week
Total Suspended Solids (TSS) ^[2]	mg/L	C-24	1/Week
Cyanide ^[3]	µg/L	Grab	1/Quarter

Footnotes:

^[1] The following flow information shall be reported in quarterly self-monitoring reports:

- Daily average flow rate (MGD)
- Total monthly flow volume (MG)

^[2] The Discharger shall collect influent samples on the same days as effluent samples.

^[3] The Discharger may, at its option, analyze for cyanide as weak acid dissociable cyanide using protocols specified in 40 C.F.R. part 136, or an equivalent method in the latest Standard Method edition.

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Treatment Plant Monitoring. The Discharger shall monitor treatment plant effluent at Monitoring Locations EFF-002F1 and EFF-002F2 as follows:

Table E-3. Treatment Plant Effluent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
Flow ^[1, 2]	MG/MGD	Continuous	Continuous/D	EFF-002F1 and EFF-002F2
pH ^[3]	standard units	Grab	2/Week	EFF-002F2
CBOD	mg/L	C-24	1/Week	EFF-002F1
TSS	mg/L	C-24	3/Week	EFF-002F1

Footnotes:

^[1] The following flow information shall be reported in monthly self-monitoring reports:

- Daily average flow rate (MGD)
- Total monthly flow volume (MG)

^[2] Reject water flow shall be determined using the flow measured at Monitoring Location EFF-002F2 minus the flow measured at Monitoring Location EFF 002F1.

^[3] If pH is monitored continuously, the minimum and maximum for each day shall be reported in self-monitoring reports.

4.2. EBDA Common Outfall Monitoring. The Discharger shall monitor combined effluent discharged to the EBDA Common Outfall at Monitoring Location EFF-001 or, for enterococcus and fecal coliform bacteria, Monitoring Location EFF-001D as follows. Reporting results from the EBDA Common Outfall is not required when EBDA reports the same data pursuant to Order R2-2022-0023.

Table E-4. EBDA Common Outfall Effluent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
Flow ^[1]	MG/MGD	Continuous	Continuous/D	EFF-001
Chlorine, Total Residual	mg/L	Continuous	Continuous/D ^[2,3,4]	EFF-001
Ammonia, Total	mg/L as N	C-24	2/Month	EFF-001
Copper, Total Recoverable	µg/L	C-24	1/Month	EFF-001
Cyanide, Total ^[5]	µg/L	Grab	1/Month	EFF-001
Dioxin-TEQ	µg/L	Grab	Once	EFF-001
Enterococcus Bacteria ^[6]	CFU/100 mL ^[7]	Grab	2/Week	EFF-001D
Fecal Coliform Bacteria	MPN/100 mL ^[7]	Grab	2/Week	EFF-001D
Acute Toxicity ^[8]	% Survival	C-24	1/Quarter ^[9]	EFF-001
Chronic Toxicity ^[10]	TU _c	C-24	1/Quarter ^[9]	EFF-001
Priority Pollutants ^[11]	µg/L	Grab	Once	EFF-001

Footnotes:

^[1] The following flow information shall be reported in monthly self-monitoring reports:

- Daily average flow rate (MGD)
- Total monthly flow volume (MG)

^[2] Prior to U.S. EPA approval of Regional Water Board Resolution R2-2020-0031, effluent total residual chlorine concentrations shall be monitored continuously. The Discharger shall describe all excursions of the chlorine limit in the transmittal letter of self-monitoring reports as required by Attachment G section 5.3.1.1. If monitoring continuously, the Discharger shall report through data upload to CIWQS, from discrete readings of the continuous monitoring every hour on the hour, the maximum for each day and any other discrete hourly reading that exceed the effluent limit, and, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on these discrete readings. The Discharger shall retain continuous monitoring readings for at least three years. The Regional Water Board reserves the right to use all continuous monitoring data for discretionary enforcement.

If a continuous chlorine residual monitor malfunctions or is offline for essential maintenance, the Discharger shall substitute grab samples at a frequency of no less than one sample every hour until the continuous chlorine residual monitor is back online. The Discharger shall report any substitution of grab sampling for continuous sampling in its monthly self-monitoring report.

^[3] On the first day of the month following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031, total residual chlorine concentrations shall be monitored continuously and recorded at a frequency of not less than every 5 minutes. The minimum level for total residual chlorine analysis shall be no greater than 0.05 mg/L. To document compliance with the minimum level, the Discharger shall calibrate continuous total residual chlorine analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation.

If a continuous chlorine residual monitor malfunctions or is offline for essential maintenance lasting more than an hour, the Discharger shall substitute grab samples at a frequency of no less than one sample every hour until the continuous chlorine residual monitor is back online. The Discharger shall report any substitution of grab sampling for continuous sampling in its monthly self-monitoring report.

To evaluate compliance with the one-hour average effluent limit, the Discharger shall consider all readings recorded within each hour. The monitoring period shall begin every hour on the hour. All readings below the minimum level shall be treated as zeros for compliance evaluation. The Discharger shall calculate arithmetic means for each hour using all the readings for that hour. The Discharger shall report through data upload to CIWQS the maximum one-hour arithmetic mean for each calendar day and any other arithmetic mean values that exceed the effluent limit. The Discharger shall retain documentation of chlorine results for at least three years.

^[4] The Discharger may elect to use continuous on-line monitoring systems for measuring or determining that a residual dechlorinating agent (e.g., sodium bisulfite) is present. Such monitoring systems may be used to prove that anomalous residual chlorine exceedances measured by online chlorine analyzers are false positives and are not valid total residual chlorine detections because it is chemically improbable to have chlorine present in the presence of a dechlorinating agent. If the data from continuous total residual chlorine analyzers provide convincing evidence that chlorine residual exceedances are false positives, the exceedances shall not be violations of this Order's total residual chlorine effluent limits.

^[5] The Discharger may, at its option, analyze for cyanide as weak acid dissociable cyanide using protocols specified in 40 C.F.R. part 136, or an equivalent method in the latest Standard Method edition.

^[6] U.S. EPA Method 1600 or an equivalent method is suggested to measure culturable enterococci.

^[7] Results may be reported as either MPN/100 mL if the laboratory method used provides results in MPN/100 mL or CFU/100 mL if the laboratory method used provides results in CFU/100 mL.

^[8] Acute toxicity tests shall be performed in accordance with MRP section 5.1.

^[9] Acute bioassay tests may be performed concurrently with chronic bioassay tests in accordance with MRP section 5. If the Discharger fails to comply with the acute effluent limitations or exceeds the chronic toxicity accelerated monitoring triggers, the Discharger shall accelerate acute and chronic toxicity monitoring to 1/2 months for one year.

^[10] Chronic toxicity tests shall be performed in accordance with MRP section 5.2.

^[11] The Discharger shall monitor for the pollutants listed in Attachment G, Table B.

4.3. Purified Water Pilot Monitoring. The Discharger shall monitor purified water discharged to Alamo Canal at Monitoring Location EFF-002F3 as follows:

Table E-5. Purified Water Pilot Effluent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MG/MGD	Continuous	Continuous/D
Chlorine, Total Residual	mg/L	Grab	1/Week ^[2,3,4,5]
Priority Pollutants ^[6]	µg/L	Grab	Once
Municipal Supply Pollutants ^[7]	mg/L	Grab	Once

Footnotes:

^[1] The following flow information shall be reported in monthly self-monitoring reports:

- Daily average flow rate (MGD)
- Total monthly flow volume (MG)

^[2] The minimum sampling frequency shall be 1/Day for the first 30 days of the initial start of discharge (i.e., the first 30-day startup period of the pilot project coming online). If there are no limit exceedances after the first 30 days of discharge, the Discharger may reduce the minimum sampling frequency to 1/Week. If the limit is later exceeded, the Discharger shall return to conducting samples 1/Day for 30 days. If full compliance is demonstrated after the 30-day period, the Discharger may return to sampling 1/Week.

^[3] The Discharger may elect to use continuous on-line monitoring systems for measuring total residual chlorine or determining that a residual dechlorinating agent (e.g., sodium bisulfite) is present. Such monitoring systems may be used to prove that anomalous residual chlorine exceedances measured by online chlorine analyzers are false positives and are not valid total residual chlorine detections because it is chemically improbable to have chlorine present in the presence of a dechlorinating agent. If the data from continuous total residual chlorine analyzers provide convincing evidence that chlorine residual exceedances are false positives, the exceedances shall not be violations of this Order's total residual chlorine effluent limits.

^[4] The Discharger shall describe all excursions of the chlorine limit in the transmittal letter of self-monitoring reports as required by Attachment G section 5.3.1.1. If monitoring continuously and it is prior to U.S. EPA approval of Regional Water Board Resolution R2-2020-0031, the Discharger shall report through data upload to CIWQS, from discrete readings of the continuous monitoring every hour on the hour, the maximum for each day and any other discrete hourly reading that exceeds the effluent limit, and, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on these discrete readings. The Discharger shall retain continuous monitoring readings for at least three years. The Regional Water Board reserves the right to use all continuous monitoring data for discretionary enforcement.

If a continuous chlorine residual monitor malfunctions or is offline for essential maintenance, the Discharger shall substitute grab samples at a frequency of no less than 1/Day until the continuous chlorine residual monitor is back online. The Discharger shall report any substitution of grab sampling for continuous sampling in its monthly self-monitoring report.

^[5] On the first day of the month following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031, the Discharger shall begin complying with a one-hour average effluent limit (see Table 2, footnote 2 of the Order). If monitoring continuously, total residual chlorine concentrations shall be recorded at a frequency of not less than every 5 minutes. The minimum level for total residual chlorine analysis shall be no greater than 0.05 mg/L. To document compliance with the minimum level, the Discharger shall calibrate continuous total residual chlorine analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation.

To evaluate compliance with the one-hour average effluent limit, the Discharger shall consider all readings recorded within each hour (e.g., for a sampling frequency of 1/Week, the Discharger shall evaluate each sample against the effluent limit). The monitoring period shall begin every hour on the hour. All readings below the minimum level shall be treated as zeros for compliance evaluation. If monitoring continuously, the Discharger shall calculate arithmetic means for each hour using all the readings for that hour. The Discharger shall report through data upload to CIWQS the maximum one-hour arithmetic mean for each calendar day and any other arithmetic mean values that exceed the effluent limit. The Discharger shall retain documentation of chlorine results for at least three years.

^[6] The Discharger shall monitor for the pollutants listed in Attachment G, Table B.

^[7] The Discharger shall monitor for the pollutants listed in Basin Plan [Table 3-5](#) not included in Attachment G, Table B, except for color, odor, and radioactive pollutants.

5. TOXICITY MONITORING

5.1. Acute Toxicity

- 5.1.1. Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Location EFF-001 by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays. Static renewal acute toxicity bioassays may be substituted if flow-through bioassays are not practicable. These bioassays shall be performed according to the most up-to-date acute toxicity protocols in 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, 5th Edition (EPA-821-R-02-012). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

Alternatively, compliance with the acute toxicity effluent limitations may be evaluated at Monitoring Location EFF-001 by measuring survival of test organisms exposed to 96-hour, 100 percent effluent using the most recently promulgated 96-hour critical life stage toxicity tests as described in Appendix E-2. These are *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, currently first edition (EPA/600/R-95-136), *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, currently third edition (EPA-821-R-02-014). If these protocols prove unworkable, the Executive Officer may require that acute toxicity bioassays be performed using the acute toxicity protocol.

- 5.1.2. The test species shall be fathead minnow (*Pimephales promelas*). After satisfying Provision 6.3.5.1 (Commencement of Cargill Brine Discharge) of Order R2-2022-0023, the test species shall be rainbow trout (*Onchorhynchus mykiss*).
- 5.1.3. If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment. The Discharger is authorized to adjust the effluent pH in order to suppress the level of unionized (free) ammonia. This adjustment shall be achieved by continuously monitoring test tank pH and automatic addition of analytical grade acid as needed, using a combination of continuous pH-sensor/analyzer and pump.
- 5.1.4. Effluent used for fish bioassays must be dechlorinated prior to testing. If biological growth in the dechlorinated effluent sample line is a potential problem, chlorinated effluent that is dechlorinated separately from the plant dechlorination process may be used for the bioassay test. Bioassay monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is

observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

5.2. Chronic Toxicity

5.2.1. Monitoring Requirements

5.2.1.1. **Sampling.** The Discharger shall collect 24-hour composite effluent samples at Monitoring Location EFF-001 for critical life stage toxicity testing as indicated below. Effluent samples may be before disinfection for toxicity tests. For toxicity tests requiring renewals, the Discharger shall collect 24-hour composite samples on consecutive or alternating days.

5.2.1.2. **Test Species.** The test species shall be fathead minnow (*Pimephales promelas*). After satisfying Provision 6.3.5.1 (Commencement of Cargill Brine Discharge) of Order R2-2022-0023, the test species shall be blue mussel (*Mytilus galloprovincialis*).

The Discharger shall conduct a screening chronic toxicity test as described in Appendix E-1, or as described in applicable State Water Board plan provisions that become effective after adoption of this Order, following any significant change in the nature of the effluent, except for changes in accordance with Provision 6.3.5.1 of Order R2-2022-0023. If there is no significant change in the nature of the effluent, the Discharger shall conduct a screening test if required by an applicable State Water Board plan and submit the results with its application for permit reissuance. Upon completion of the chronic toxicity screening, the Discharger shall use the most sensitive species to conduct subsequent monitoring.

5.2.1.3. **Frequency.** Chronic toxicity monitoring shall be as specified below:

5.2.1.3.1. The Discharger shall monitor routinely once per quarter.

5.2.1.3.2. The Discharger shall accelerate monitoring to monthly when either of the following conditions is exceeded:

- Three-sample median value of 10 TUc, or
- Single-sample maximum value of 20 TUc.

Based on the TUC results, the Executive Officer may specify a different frequency for accelerated monitoring to ensure that accelerated monitoring provides useful information.

- 5.2.1.3.3. The Discharger shall return to routine monitoring if accelerated monitoring does not exceed the trigger in section 5.2.1.3.2, above.
- 5.2.1.3.4. If accelerated monitoring confirms consistent toxicity in excess of the trigger in section 5.2.1.3.2, above, the Discharger shall continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section 5.2.3, below.
- 5.2.1.3.5. The Discharger shall return to routine monitoring after implementing appropriate elements of the TRE, and either the toxicity drops below the trigger in 5.2.1.3.2, above, or, based on the TRE results, the Executive Officer determines that accelerated monitoring would no longer provide useful information.
- 5.2.1.3.6. Monitoring conducted pursuant to a TRE shall satisfy the requirements for routine and accelerated monitoring while the TRE is underway.
- 5.2.1.4. **Methodology.** Sample collection, handling, and preservation shall be in accordance with U.S. EPA protocols. Bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-2. These are *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, currently 1st edition (EPA/600/R-95-136). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the chronic toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. The adjustment shall not remove the influence of other substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration must be obtained prior to any such adjustment.

- 5.2.1.5. **Dilution Series.** The Discharger shall conduct tests at 100%, 50%, 25%, 10%, and 5%. The "%" represents percent effluent as discharged. Test sample pH may be controlled to the level of the effluent sample as received prior to being salted up.
- 5.2.2. **Reporting Requirements.** The Discharger shall provide toxicity test results with self-monitoring reports and shall include the following, at a minimum, for each test:

- 5.2.2.1. Sample date;
- 5.2.2.2. Test initiation date;
- 5.2.2.3. Test species;
- 5.2.2.4. End point values for each dilution (e.g., number of young, growth rate, percent survival);
- 5.2.2.5. No Observable Effect Level (NOEL) values in percent effluent. The NOEL shall equal the IC25 or EC25 (see MRP Appendix E-1). If the IC25 or EC25 cannot be statistically determined, the NOEL shall equal the No Observable Effect Concentration (NOEC) derived using hypothesis testing. The NOEC is the maximum percent effluent concentration that causes no observable effect on test organisms based on a critical life stage toxicity test;
- 5.2.2.6. IC15, IC25, IC40, and IC50 values (or EC15, EC25, EC40, and EC50) as percent effluent;
- 5.2.2.7. TU values (100/NOEL and upper and lower confidence intervals, where NOEL = IC15, IC25, or NOEC);
- 5.2.2.8. Mean percent mortality (\pm s.d.) after 96 hours in 100% effluent (if applicable);
- 5.2.2.9. IC50 or EC50 values for reference toxicant tests;
- 5.2.2.10. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia); and
- 5.2.2.11. The results of the three most recent chronic toxicity tests and the three-sample median for these results.

5.2.3. Toxicity Reduction Evaluation (TRE)

- 5.2.3.1. The Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order to be ready to respond to toxicity events. The Discharger shall review and update the work plan as necessary so that it remains current and applicable to the discharge and discharge facilities.
- 5.2.3.2. Within 30 days of exceeding the chronic toxicity trigger in section 5.2.1.3.2, above, the Discharger shall submit a TRE work plan, which shall be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.
- 5.2.3.3. Within 30 days of completing an accelerated monitoring test observed to exceed the trigger in section 5.2.1.3.2, above, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all Executive Officer comments.

- 5.2.3.4. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including U.S. EPA guidance materials. The Discharger shall conduct the TRE as a tiered evaluation as summarized below:
- 5.2.3.4.1. Tier 1 shall consist of basic data collection (routine and accelerated monitoring).
 - 5.2.3.4.2. Tier 2 shall consist of evaluation of treatment process, including operational practices and in-plant process chemicals.
 - 5.2.3.4.3. Tier 3 shall consist of a toxicity identification evaluation (TIE).
 - 5.2.3.4.4. Tier 4 shall consist of a toxicity source evaluation.
 - 5.2.3.4.5. Tier 5 shall consist of a toxicity control evaluation, including options for modifications of in-plant treatment processes.
 - 5.2.3.4.6. Tier 6 shall consist of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
- 5.2.3.5. The Discharger may end the TRE at any stage if monitoring finds there is no longer consistent toxicity (i.e., compliance with the trigger in section 5.2.1.3.2, above).
- 5.2.3.6. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. The Discharger shall employ all reasonable efforts using currently available TIE methodologies.
- 5.2.3.7. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the toxic substances from the discharge. The Discharger shall take all reasonable steps to reduce toxicity to levels below the chronic toxicity trigger.
- 5.2.3.8. Many recommended TRE elements parallel required or recommended efforts related to source control, pollution prevention, and stormwater control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to demonstrate compliance with TRE requirements.

6. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall continue to participate in the Regional Monitoring Program (RMP), which collects data on pollutants and toxicity in San Francisco Bay water,

sediment, and biota. The Discharger shall also provide supplemental funding to the RMP to support additional studies for constituents of emerging concern. The Discharger shall, either individually or in collaboration with other dischargers, submit or cause to submit a report each year that indicates the status of its RMP payment. The report shall be due on the same day as the letters certifying the Discharger's annual payment in support of RMP receiving water monitoring (currently February 1 each year).

7. PRETREATMENT AND BIOSOLIDS MONITORING REQUIREMENTS

The Discharger shall comply with the following pretreatment monitoring requirements for influent at Monitoring Location INF-002F, effluent at Monitoring Location EFF-002F2, and biosolids at Monitoring Location BIO-002F. The Discharger shall report summaries of analytical results in annual pretreatment reports in accordance with Attachment H. If instructed to do so, the Discharger shall report biosolids analytical results with its electronic self-monitoring reports by manual entry, by Electronic Data Format or CIWQS Data Format (EDF/CDF), or as an attached file.

Table E-6. Pretreatment and Biosolids Monitoring

Parameter	Influent (INF-002F) Sampling Frequency ^[7]	Effluent (EFF-002F2 ^[8]) Sampling Frequency ^[7]	Biosolids (BIO-002F) Sampling Frequency	Influent and Effluent Sample Type	Biosolids Sample Type ^[10]
VOC ^[1]	1/Year	Once	1/Year	Grab	Grab
BNA ^[2]	1/Year	Once	1/Year	Grab	Grab
Metals and Other Elements ^[3]	1/Year	1/Month	1/Year	C-24 ^[9]	Grab
Hexavalent Chromium ^[4]	1/Year	1/Month	1/Year	Grab	Grab
Mercury	1/Quarter	1/Quarter ^[5]	1/Year	Grab or C-24 ^[9]	Grab
Cyanide, Total ^[6]	1/Quarter	1/Month	1/Year	Grab	Grab

Footnotes:

^[1] VOC: volatile organic compounds

^[2] BNA: base/neutrals and acid extractable organic compounds.

^[3] The metals and other elements are arsenic, cadmium, copper, lead, nickel, selenium, silver, and zinc.

^[4] The Discharger may choose to monitor and report total chromium instead of hexavalent chromium. Samples collected for total chromium measurements may be 24-hour composites.

^[5] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring at Monitoring Location EFF-002F2.

^[6] Discharger may, at its option, analyze for cyanide as weak acid dissociable cyanide using protocols specified in 40 C.F.R. part 136, or an equivalent method in the latest Standard Method edition.

^[7] Influent and effluent monitoring conducted in accordance with MRP Tables E-2 and E-4 may be used to satisfy these pretreatment monitoring requirements.

^[8] The Discharger may sample from Monitoring Location EFF-002F1 if recycled water activities result in flow that is too low to provide a meaningful sample at Monitoring Location EFF-002F2.

^[9] If an automatic compositor is used, the Discharger shall obtain 24-hour composite samples through flow-proportioned composite sampling. Alternatively, 24-hour composite samples may consist of discrete grab samples combined (volumetrically flow-weighted) prior to analysis or mathematically flow-weighted.

^[10] Biosolids samples shall be composites of the biosolids. Biosolids collection and monitoring shall comply with the requirements specified in Attachment H, Appendix H-4.

8. RECYCLED WATER MONITORING REQUIREMENTS

The Discharger shall comply with the following recycled water monitoring requirements. The Executive Officer may modify these requirements to reflect any changes made to the requirements of State Water Board Order WQ 2019-0037 EXEC (Amending Monitoring and Reporting Programs for Waste Discharge Requirements, National Pollutant Discharge Elimination System Permits, Water Reclamation Requirements, Master Recycling Permits, and General Waste Discharge Requirements).

8.1. Influent Monitoring. The Discharger shall monitor the monthly volume of influent to each individual treatment plant.

8.2. Production Monitoring. The Discharger shall monitor the monthly volume for each level of treated effluent (e.g., secondary or tertiary) at Monitoring Location REC-002F.

8.3. Discharge Monitoring. The Discharger shall monitor the monthly volumes discharged to each of the following, for each level of treated effluent (e.g., secondary or tertiary) from the treatment plant:

8.3.1. Inland surface waters, specifying volumes required to maintain minimum instream flow;

8.3.2. Enclosed bays, estuaries and coastal lagoons, and ocean waters;

8.3.3. Natural systems, such as wetlands, wildlife habitats, and duck clubs, where augmentation or restoration has occurred, and that are not part of a wastewater treatment or water recycling treatment plant;

8.3.4. Underground injection wells, such as those classified by U.S. EPA's Underground Injection Control Program, excluding groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface; and

8.3.5. Land, where beneficial use is not taking place, including evaporation or percolation ponds, overland flow, or spray irrigation disposal, excluding pastures or fields with harvested crops.

8.4. Reuse Monitoring. The Discharger shall monitor the following in compliance with California Code of Regulations, Title 22:

8.4.1. Monthly volume of recycled water distributed; and

8.4.2. Annual volumes of treated wastewater distributed for use in each of the use categories listed below:

- 8.4.2.1. Agricultural irrigation: pasture or crop irrigation;
- 8.4.2.2. Landscape irrigation: irrigation of parks, greenbelts, and playgrounds; school yards; athletic fields; cemeteries; residential landscaping, common areas; commercial landscaping; industrial landscaping; and freeway, highway, and street landscaping;
- 8.4.2.3. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses;
- 8.4.2.4. Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered;
- 8.4.2.5. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered;
- 8.4.2.6. Geothermal energy production: augmentation of geothermal fields;
- 8.4.2.7. Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments;
- 8.4.2.8. Groundwater recharge: the planned use of recycled water for replenishment of a groundwater basin or an aquifer that has been designated as a source of water supply for a public water system. Includes surface or subsurface application, except for seawater intrusion barrier use;
- 8.4.2.9. Seawater intrusion barrier: groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface;
- 8.4.2.10. Reservoir water augmentation: the planned placement of recycled water into a raw surface water reservoir used as a source of domestic drinking water supply for a public water system, as defined in Health and Safety Code section 116275, or into a constructed system conveying water to such a reservoir (Water Code § 13561);
- 8.4.2.11. Raw water augmentation: the planned placement of recycled water into a system of pipelines or aqueducts that delivers raw water to a drinking water treatment plant that provides water to a public water system as defined in Health and Safety Code section 116275 (Water Code § 13561); and
- 8.4.2.12. Other potable uses: both indirect and direct potable reuse other than for groundwater recharge, seawater intrusion barrier, reservoir water augmentation, or raw water augmentation.

9. REPORTING REQUIREMENTS

9.1. General Monitoring and Reporting Requirements. The Discharger shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping.

9.2. Self-Monitoring Reports (SMRs)

9.2.1. SMR Format. The Discharger shall electronically submit SMRs using the State Water Board's [California Integrated Water Quality System \(CIWQS\) Program website](https://waterboards.ca.gov/water_issues/programs/ciwqs/) (waterboards.ca.gov/water_issues/programs/ciwqs). The CIWQS website will provide additional information for SMR submittal in the event of a planned service interruption for electronic submittal.

9.2.2. SMR Due Dates and Contents. The Discharger shall submit SMRs by the due dates, and with the contents, specified below:

9.2.2.1. Monthly SMRs — Monthly SMRs shall be due 30 days after the end of each calendar month, covering that calendar month. Each SMR shall contain the applicable items described in Provision 6.3.2 (Effluent Characterization Study and Report) of the Order, Attachment D section 5.2, and Attachment G section 5.3. Each SMR shall include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the Discharger shall include the results of such monitoring in the calculations and reporting for the SMR.

9.2.2.2. Annual SMR — Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the applicable items described in Provisions 6.3.2 (Effluent Characterization Study and Report) and Attachment G section 5.3.1.6.

9.2.3. Specifications for Submitting SMRs to CIWQS. The Discharger shall submit analytical results and other information using one of the following methods:

Table E-7. CIWQS Reporting

Parameter	Method of Reporting: EDF/CDF data upload	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for all results	-
Dissolved Oxygen, Temperature	Required for monthly maximum and minimum results only ^[1]	Discharger may use this method for all results or keep records
Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Zinc, Dioxins & Furans (by U.S. EPA Method 1613),	Required for all results ^[2]	-

Parameter	Method of Reporting: EDF/CDF data upload	Attached File
Other Pollutants (by U.S. EPA Methods 601, 602, 608, 610, 614, 624, and 625)		
Volume and Duration of Blended Discharge ^[3]	Required for all blended effluent discharges	-
Analytical Method	Not required (Discharger may select "data unavailable") ^[1]	-
Collection Time, Analysis Time	Not required	-

Footnotes:

^[1] The Discharger shall continue to monitor at the minimum frequency specified in this MRP, keep records of the measurements, and make the records available upon request.

^[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).

^[3] The requirement for volume and duration of blended discharge applies only if this Order authorizes the Discharger to discharge blended effluent.

The Discharger shall arrange all reported data in a tabular format and summarize data to clearly illustrate whether the Facility is operating in compliance with effluent limitations. The Discharger is not required to duplicate the submittal of data entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format, the Discharger shall electronically submit the data in a tabular format as an attachment.

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

Table E-8. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Continuous/D	Order effective date	All times
1/Hour	Order effective date	Every hour on the hour
1/Day	Order effective date	Any 24-hour period that reasonably represents a calendar day for sampling purposes (e.g., beginning at midnight and continuing through 11:59 p.m.)
1/Week 2/Week 3/Week 4/Week 5/Week	First Sunday following or on Order effective date	Sunday through Saturday
1/Month	First day of calendar month following or on Order effective date	First day of calendar month through last day of calendar month
1/Quarter	Closest January 1, April 1, July 1, or October 1 before or after Order effective date ^[1]	January 1 through March 31 July 1 through September 30 April 1 through June 30 October 1 through December 31
1/Year	Closest January 1 before or after Order effective date ^[1]	January 1 through December 31

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
2/Year	Closest November 1 or February 1 before or after Order effective date ^[1]	Once after the first storm of the season during the interval from November 1 through January 31, and once during the interval from February 1 through May 31
Once	Order effective date	Once during the term of the Order within 12 months prior to applying for permit reissuance

Footnote:

^[1] Monitoring performed under NPDES Permit CA0037869 (for the EBDA Common Outfall) may be used to satisfy monitoring required by this Order.

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

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

9.2.5.2. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For purposes of data collection, the Discharger shall require the laboratory to write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

9.2.5.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected", or ND.

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

9.2.6. Compliance Determination. Compliance with effluent limitations shall be determined using sample reporting protocols defined above, in the Fact Sheet, and in Attachments A, D, and G. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the

concentration of the pollutant in the monitoring sample is greater than the effluent limitation and, if applicable, greater than or equal to the RL.

9.3. Discharge Monitoring Reports (DMRs). DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or the latest upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](https://waterboards.ca.gov/water_issues/programs/discharge_monitoring) (waterboards.ca.gov/water_issues/programs/discharge_monitoring).

9.4 Recycled Water Reports. The Discharger shall electronically submit annual reports to the State Water Board by April 30 each year covering the previous calendar year using the [State Water Board's GeoTracker website](https://geotracker.waterboards.ca.gov) (geotracker.waterboards.ca.gov) under a site-specific global identification number. The annual report shall include the elements specified in section 8, above.

Information for setting up and using the GeoTracker system can be found in the ESI Guide for Responsible Parties document on the [State Water Board's website](https://waterboards.ca.gov/ust/electronic_submittal/index.html) (waterboards.ca.gov/ust/electronic_submittal/index.html).

APPENDIX E-1 CHRONIC TOXICITY DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

1. Definition of Terms

- 1.1. No observed effect level (NOEL).** For compliance determination, the NOEL is equal to IC25 or EC25. If the IC25 or EC25 cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- 1.2. Effective concentration (EC).** The EC is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.
- 1.3. Inhibition concentration (IC).** The IC is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC25 is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as U.S. EPA's Bootstrap Procedure.
- 1.4. No observed effect concentration (NOEC).** The NOEC is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

2. Chronic Toxicity Screening Phase Requirements

- 2.1.** The Discharger shall perform screening phase monitoring subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or changes already described in accordance with Provision 6.3.5.1 of Order R2-2022-0023.
- 2.2** Design of the screening phase shall, at a minimum, consist of the following elements:
- 2.2.1.** Use of test species specified in Appendix E-2, attached, and use of the protocols referenced in those tables.

2.2.2. Two stages:

2.2.2.1. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Appendix E-2 (attached).

2.2.2.2. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results.

2.2.3. Appropriate controls.

2.2.4. Concurrent reference toxicant tests.

2.2.5. Dilution series of 100%, 50%, 25%, 12.5%, 6.25%, and 0.0%, where “%” is percent effluent as discharged, or as otherwise approved by the Executive Officer if different dilution ratios are needed to reflect discharge conditions.

2.3. The Discharger shall submit a screening phase proposal. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharger shall commence with screening phase monitoring.

APPENDIX E-2 SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Table AE-1. Critical Life Stage Toxicity Tests for Estuarine Waters

Species	Scientific Name	Effect	Test Duration	Reference
Alga	<i>Skeletonema costatum</i> , <i>Thalassiosira pseudonana</i>	Growth rate	4 days	1
Red alga	<i>Champia parvula</i>	Number of cystocarps	7–9 days	3
Giant kelp	<i>Macrocystis pyrifera</i>	Percent germination; germ tube length	48 hours	2
Abalone	<i>Haliotis rufescens</i>	Abnormal shell development	48 hours	2
Oyster Mussel	<i>Crassostrea gigas</i> , <i>Mytilus edulis</i>	Abnormal shell development; percent survival	48 hours	2
Echinoderms Urchins Sand dollar	<i>Strongylocentrotus purpuratus</i> , <i>S. franciscanus</i> , <i>Dendraster excentricus</i>	Percent fertilization or larval development	1 hour or 72 hours	2
Shrimp	<i>Americamysis bahia</i>	Percent survival; growth	7 days	3
Shrimp	<i>Holmesimysis costata</i>	Percent survival; growth	7 days	2
Topsmelt	<i>Atherinops affinis</i>	Percent survival; growth	7 days	2
Silverside	<i>Menidia beryllina</i>	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.
3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/821/R-02/014. October 2002.

Table AE-2. Critical Life Stage Toxicity Tests for Fresh Waters

Species	Scientific Name	Effect	Test Duration	Reference
Fathead minnow	<i>Pimephales promelas</i>	Survival; growth rate	7 days	1
Water flea	<i>Ceriodaphnia dubia</i>	Survival; number of young	7 days	1
Alga	<i>Selenastrum capricornutum</i>	Final cell density	4 days	1

Toxicity Test Reference:

1. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, fourth Edition Chronic manual (EPA-821-R-02-013, October 2002).

Table AE-3. Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics: Discharges to Ocean	Receiving Water Characteristics: Discharges to Marine/ Estuarine Waters ^[1]	Receiving Water Characteristics: Discharges to Freshwater
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type:			
Freshwater ^[2]	0	1 or 2	3
Marine/Estuarine	4	3 or 4	0
Total number of tests	4	5	3

Footnotes:

- ^[1] (a) Marine refers to receiving water salinities greater than 10 parts per thousand (ppt) at least 95 percent of the time during a normal water year.
 (b) Freshwater refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.
 (c) Estuarine refers to receiving water salinities that fall between those of marine and freshwater, as described above.
- ^[2] The freshwater species may be substituted with marine species if:
 (a) The salinity of the effluent is above 1 ppt greater than 95 percent of the time, or
 (b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section 2.2 of the Order, the Regional Water Board incorporates this Fact Sheet as findings supporting the issuance of the Order.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	2 019033001
CIWQS Place ID	220792
Discharger	Dublin San Ramon Services District Livermore-Amador Valley Water Management Agency (LAVWMA) East Bay Dischargers Authority (EBDA)
Facility Name	Dublin San Ramon Services District Wastewater Treatment Plant and collection system
Facility Address	7399 Johnson Drive, Pleasanton, CA 94588 Alameda County
Facility Contact, Title, Phone, and Email	Jeff Carson, Operations Director, (925) 875-2345, carson@dsrsd.com
Authorized Person to Sign and Submit Reports	Same as facility contact
Mailing Address	Dublin San Ramon Services District 7051 Dublin Road Dublin, CA 94569
Billing Address	Same as Mailing Address
Facility Type	Publicly-Owned Treatment Works (POTW)
Major or Minor Facility	Major
Water Quality Threat	1
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	State Water Board Order WQ 2016-0068-DDW
Mercury and PCBs Requirements	NPDES Permit CA0038849
Nutrients Requirements	NPDES Permit CA0038873
Facility Permitted Flow	20.2 million gallons per day (MGD) – average daily dry weather design flow plus Zone 7 reject water 23.9 MGD – proposed average daily dry weather design flow plus Zone 7 reject water
Facility Design Flow	60.7 MGD – wet weather design flow 74 MGD – proposed wet weather design flow
Watershed	San Francisco Bay
Receiving Waters	Lower San Francisco Bay and Alamo Canal
Receiving Water Type	Marine (Lower San Francisco Bay) and Freshwater (Alamo Canal)

- 1.1.** The Dublin San Ramon Services District, Livermore-Amador Valley Water Management Agency (LAVWMA), and East Bay Dischargers Authority (EBDA) (collectively, Discharger) discharge treated effluent to Lower San Francisco Bay. LAVWMA is a Joint Powers Agency comprised of the Dublin San Ramon Services District, City of Livermore, and City of Pleasanton.

The Dublin San Ramon Services District owns and operates the Dublin San Ramon Services District Wastewater Treatment Plant and wastewater collection system. The plant provides secondary treatment of wastewater collected from its service area. The Dublin San Ramon Services District also operates the LAVWMA Export and Storage Facilities, through which it transports its treated effluent to the LAVWMA export pump station, where it is combined with City of Livermore effluent and discharged to the EBDA Common Outfall.

The City of Pleasanton operates and maintains a collection system only (covered by State Water Board Order 2006-0003-DWQ, as amended by State Water Board Order WQ 2013-0058-EXEC), which conveys wastewater to the Dublin San Ramon Services District's treatment plant through a separate agreement.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policies are held to be equivalent to references to the Discharger herein.

- 1.2.** The Discharger is regulated pursuant to NPDES Permit CA0038008. The Discharger is authorized to discharge subject to the WDRs in this Order at the discharge location described in Table 1 of this Order.
- 1.3.** The Discharger was previously subject to Order R2-2017-0017 (previous order) as amended by Orders R2-2016-0008, R2-2021-0019, and R2-2021-0028.
- Order R2-2016-0008 amended the previous order to provide for an alternate monitoring program.
 - Order R2-2021-0028 amended Order R2-2016-0008 and the previous order to provide updated monitoring requirements and require supplemental funding for the Regional Monitoring Program (RMP).
 - Order R2-2021-0019 amended the previous order to update effluent limits and monitoring requirements for total residual chlorine and remove effluent limits and monitoring requirements for oil and grease.

Provisions of these orders have been incorporated into this Order as appropriate and applicable.

- 1.4.** The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on September 30, 2021.

- 1.5. Regulations in 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, this Order limits the effective period for the discharge authorization. Pursuant to 40 C.F.R. section 122.6(d) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all requirements for continuation of expired permits.
- 1.6. The Discharger is also regulated under NPDES Permits CA0038849 and CA0038873, which establish requirements on mercury and polychlorinated biphenyls (PCBs) and nutrients from wastewater discharges to San Francisco Bay. This Order does not affect those permits.
- 1.7. When applicable, state law requires dischargers to file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce such requirements under Water Code section 1211. This is not an NPDES permit requirement.

2. FACILITY DESCRIPTION

2.1. Wastewater Collection and Treatment

- 2.1.1. **Location and Service Area.** As shown in Attachment B, the wastewater treatment plant is located at 7399 Johnson Drive in Dublin. It provides secondary treatment of domestic, commercial, and industrial wastewater for the cities of Dublin, Pleasanton, and parts of San Ramon. The plant serves a population of about 162,500.
- 2.1.2. **Collection System.** The collection system is a separate sewer system comprised of approximately 220 miles of publicly-owned pipes. The collection system takes wastewater from the City of Pleasanton collection system, which is comprised of approximately 275 miles of publicly-owned pipes.
- 2.1.3. **Wastewater Treatment**
 - 2.1.3.1. **Dublin San Ramon Services District Wastewater Treatment Plant.** The plant can provide secondary treatment for an average daily dry weather design flow of 17.0 MGD. In addition, the plant also receives up to 3.2 MGD of reverse osmosis reject water from the Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency) (see Fact Sheet section 2.1.3.2, below). The reject water is combined with the plant effluent after secondary treatment and disinfection, and before Monitoring Location EFF-002F2. In 2021, the average daily dry weather influent flow was 11.5 MGD. Due to wastewater recycling, the average daily dry weather effluent flow was 3.5 MGD, including the Zone 7 Water Agency reject water.

As shown in Attachment C, the plant treatment process consists of screening, grit removal, primary clarification, activated sludge aeration, secondary clarification, and sodium hypochlorite disinfection. The plant also has four concrete-lined storage basins with a total capacity of 22 million gallons (with two feet of freeboard) for flow equalization.

- 2.1.3.2. **Zone 7 Water Agency Demineralization and Brine Disposal Project.** The Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency, or Zone 7) serves as the overall water quality management agency for the Alameda Creek watershed north of the Niles area of Fremont and has the primary responsibility for managing the Livermore-Amador Valley's surface and groundwater resources. In accordance with Regional Water Board Order 93-159, Zone 7 developed a Salt Management Plan in 1998 to address the issues of salt accumulation within groundwater and to identify potential salt management strategies to protect groundwater quality. As part of this plan, Zone 7 operates groundwater demineralization facilities to offset a projected 6,000 tons per year of net salt loading to the main basin and to accommodate increased use of recycled water.

Zone 7's groundwater demineralization facilities treat approximately 15 MGD of groundwater through reverse osmosis. The reverse osmosis facilities produce a maximum of 3.2 MGD of reverse osmosis reject water that is introduced to the Dublin San Ramon Services District Wastewater Treatment Plant through a dedicated sewer upstream of Monitoring Location EFF-002F2, but downstream of the treatment and disinfection described in Fact Sheet section 2.1.3.1, above. The reverse osmosis reject water, therefore, is a component of the Dublin San Ramon Services District's effluent and is transported through the LAVWMA and EBDA facilities to become part of the combined effluent discharged to San Francisco Bay. The Dublin San Ramon Services District's acceptance of this reverse osmosis reject water is pursuant to agreements between EBDA, LAVWMA, and Zone 7.

- 2.1.3.3. **Livermore-Amador Valley Water Management Agency (LAVWMA).** The Dublin San Ramon Services District's treated effluent, including the Zone 7 reverse osmosis reject water, is exported to the LAVWMA Export and Storage Facilities, where it is combined with the City of Livermore's treated effluent and flows into three flow-equalization basins before being pumped through LAVWMA's pipeline to the EBDA pipeline for dechlorination at EBDA's Marina Dechlorination Facility. By contractual agreement, LAVWMA is responsible for operating and maintaining the LAVWMA facilities, and EBDA is responsible for the combined transport, dechlorination, and discharge of LAVWMA's effluent.

The Discharger may begin a purified water pilot project at the LAVWMA Export and Storage Facilities during this Order term (see Fact Sheet

section 2.6, Planned Changes). The project would route a small volume of LAVWMA's secondary treated and disinfected wastewater (up to 0.5 MGD) away from the EBDA pipeline for additional treatment to produce purified water for reuse. Treatment would consist of membrane filtration, reverse osmosis, and ultraviolet light-based advanced oxidation of LAVWMA's wastewater. Treatment would also include hydrogen peroxide dosing between reverse osmosis and ultraviolet light-based advanced oxidation to quench any remaining total residual chlorine and facilitate ultraviolet light-based pollutant degradation.

- 2.1.4. **Sludge and Biosolids Management.** Sludge is thickened by dissolved air floatation, anaerobically digested, and treated in six onsite sludge lagoons for approximately five years. The treated sludge is injected into soil at an onsite disposal area or Dedicated Land Disposal Site in accordance with Order R2-2007-0053 or the most recent order (see Attachment B, Figure B-3).
- 2.1.5. **Stormwater Management.** All stormwater flows in contact with equipment or wastewater at the treatment plant are collected and directed to the plant headworks for treatment. Therefore, no additional stormwater requirements are necessary.
- 2.1.6. **Recycled Water.** The plant can provide tertiary treatment for up to 16.2 MGD of recycled water, which is used for irrigation. In 2021, the plant produced an average of 5.2 MGD of recycled water.
- 2.2. **Discharge Point and Receiving Water.** The Discharger discharges treated effluent to Lower San Francisco Bay through the EBDA Common Outfall (Discharge Point 001). Lower San Francisco Bay is located in the Lower San Francisco Bay Basin watershed between the San Francisco-Oakland Bay Bridge and the San Mateo-Hayward Bridge. The outfall's diffuser is located 37,000 feet (about 7 miles) offshore and is submerged 23.5 feet under the water surface. The diffuser consists of 251 six-inch bell mouth riser ports that each splits into 2 three-inch perpendicular discharge points. In August 2016, EBDA completed a two-week diver and remote operated vehicle inspection of the outfall and concluded that it is in good working order. The outfall meets the requirements to be considered a deepwater discharge as defined in Basin Plan section 4.6.1.

During this Order term, the Discharger may begin discharging approximately 0.5 MGD of purified water to Alamo Canal (Discharge Point 003) as part of a purified water pilot project (see Fact Sheet section 2.6, Planned Changes). The discharge point to Alamo Canal, a constructed flood control channel, is a shallow-water outfall that does not have a diffuser. The membrane filtration backwash water and reverse osmosis reject water generated from the purified water pilot project would be routed back to the Dublin San Ramon Wastewater Treatment Plant headworks for treatment (see Fact Sheet section 2.1.3.1.).

2.3. Previous Requirements and Monitoring Data. The table below presents the previous order's effluent limitations and representative monitoring data from the previous order term:

Table F-2. Previous Effluent Limitations and Monitoring Data

Agency/Parameter	Unit	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit	Other Limit	Long-Term Average ^[1]	Highest Daily Value ^[1]
Treatment Plant (EFF-002F1 and EFF-002F2)	-	-	-	-	-	-	-
Carbonaceous Biochemical Oxygen Demand (5 day @ 20°C) (CBOD)	mg/L	25	40	-	-	5.6	24
CBOD percent removal	%	85 (minimum)	-	-	-	98	94 ^[2]
Total Suspended Solids (TSS)	mg/L	30	45	-	-	10	26
TSS percent removal	%	85 (minimum)	-	-	-	97	93 ^[2]
pH	s.u.	-	-	-	6.5 – 8.5 ^[3]	7.6	6.6 – 9.4 ^[4, 5]
EBDA Common Outfall (EFF-001 or EFF-001D)	-	-	-	-	-	-	-
Chlorine, Total Residual	mg/L	-	-	0.0	-	0.0 ^[6]	0.0 ^[6]
Ammonia, Total	mg/L	91	-	120	-	33	41
Copper, Total Recoverable	µg/L	53	-	69	-	7.2	10
Cyanide, Total	µg/L	21	-	40	-	1.5	3.1
Dioxin-TEQ	µg/L	1.4 x 10 ⁻⁸	-	2.8 x 10 ⁻⁸	-	0.0 ^[7]	0.0 ^[7]
Enterococcus Bacteria	MPN/100 mL	-	-	-	240 (monthly geometric mean)	52	42 ^[8]
Fecal Coliform Bacteria	MPN/100 mL	-	-	-	500 (monthly geometric mean)	105	126 ^[8]
Fecal Coliform Bacteria	MPN/100 mL	-	-	-	1,100 (11-sample 90 th percentile)	105	900 ^[9]
Acute Toxicity	% survival	-	-	-	Not less than 90% (11-Sample Median)	93	90 ^[10]

Agency/Parameter	Unit	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit	Other Limit	Long-Term Average ^[1]	Highest Daily Value ^[1]
Acute Toxicity	% survival	-	-	-	Not less than 70% (11-Sample 90th Percentile)	93	85 ^[11]
Chronic Toxicity	TU _c	-	-	-	10 (3-sample median)	1.2	1.5 ^[12]
Chronic Toxicity	TU _c	-	-	-	20 (single sample maximum)	1.2	3.2
Oil and Grease	mg/L	10	-	20	-	<1.5 ^[13]	2.7

Footnotes:

- ^[1] Based on monitoring data from July 1, 2017, through December 31, 2021.
- ^[2] Lowest percent removal value on a monthly basis.
- ^[3] Instantaneous minimum and instantaneous maximum.
- ^[4] Range of lowest to highest pH values.
- ^[5] The Discharger did not violate the instantaneous minimum effluent limitation in this instance because the excursion did not exceed 60 minutes.
- ^[6] All values were below the method detection limit and were counted as 0.0 mg/L for compliances purposes.
- ^[7] All congener values were below the minimum level and were counted as 0.0 µg/L for compliances purposes (see Attachment G section 5.3.1.4.4).
- ^[8] Highest geometric mean value on a monthly basis.
- ^[9] Highest 11-sample 90th percentile value.
- ^[10] Lowest 11-sample median value.
- ^[11] Lowest 11-sample 90th percentile value.
- ^[12] Highest 3-sample median value.
- ^[13] The long-term average was below the method detection limit of 1.5 mg/L.

2.4. Compliance Summary

2.4.1. Wastewater Treatment. The Discharger did not violate its effluent limitations during the previous order term.

2.4.2. Collection System. The table below summarizes the Discharger's Category 1 sanitary sewer overflow (SSO) rates for the last five years. Category 1 SSOs are those that reach waters of the United States and thus may violate Prohibition 3.4 of this Order.

Table F-3. Collection System and Category 1 SSO Rates

(Values based on CIWQS data analysis completed in October 2021) ^[1]

Agency/Region	Length (miles) ^[2]	Average Pipe Age (years) ^[3]	2016	2017	2018	2019	2020
Discharger	220	29	0	0	0	0	0.46
San Francisco Bay Region	17,700	46	1.2	1.7	0.71	1.4	0.67

State of California	111,000	44	0.46	0.68	0.39	0.57	0.33
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Footnotes:

- [1] The State Water Board's *Enrollee's Guide to the SSO Database* defines "Total number of SSOs per 100 miles of Sewer" as "...the number of SSOs, for which the reporting enrollee is responsible, for every 100 miles of pipe or sewer lines in an enrollee's sanitary sewer system. Due to the large variation in facility specific characteristics, this metric should only be viewed as a rough comparison of the operation and maintenance performance of enrollees and their sanitary sewer systems."
- [2] Lengths shown are based on 2020 data.
- [3] The average pipe age for the State of California is estimated based on the percentages of piping constructed during each decade as reported by enrollees under State Water Board Order 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC.

The above SSO rates are normalized relative to a distance of 100 miles. During the previous order term, the Discharger's Category 1 SSO rates were below the San Francisco Bay Region rates and generally below the statewide rates. Between 2016 and 2020, the Discharger had one Category 1 SSO.

The Discharger has a collection system rehabilitation and replacement program in place that includes routine sewer main cleanings and inspections. Generally, the Discharger cleans sewer mains on a 6-year cycle and inspects sewer mains on a 12-year cycle and manholes on a 6-year cycle. These frequencies may be increased based on inspection data. The Discharger cleans hotspot areas in the collection system (areas where there are frequent blockages) on a monthly frequency until blockages become less frequent. The Discharger also implements a root control program.

2.5. Sea Level Rise. Sea level rise does not threaten the Facility. The distance between the Facility and the coastline does not put it at risk of flooding impacts from sea level rise or groundwater rise. Additionally, the plant and collection system are located above the 100-year flood plain.

2.6. Planned Changes. During this Order term, the Discharger plans to complete a plant-wide upgrade to its supervisory control and data acquisition system.

Also, the Discharger may initiate a purified water pilot project at the LAVWMA Export and Storage Facilities. The project would purify about 0.5 MGD of LAVWMA's combined secondary-treated wastewater. The purified water would be discharged into Alamo Canal, a tributary to Alameda Creek, to recharge the Niles Cone Groundwater Basin underneath Alameda Creek. The purpose of the project would be to explore the feasibility of, and improve the public perception of, potable reuse (i.e., treating wastewater to enhance the region's drinking water supply). The discharge from this project is expected to last about two years.

The Discharger also plans to increase its average daily dry weather flow capacity from 20.2 MGD to 23.9 MGD. The facility upgrades necessary to increase its capacity by 3.7 MGD may not occur within this Order term, but this Order authorizes this change, subject to conditions in Provision 6.3.5.4.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. EPA, and Water Code chapter 5.5, division 7 (commencing with § 13370). It serves as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code division 13, chapter 3 (commencing with § 21100).

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. Water Quality Control Plan. The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan.

State Water Board Resolution 88-63, establishes as state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of the marine influence on Lower San Francisco Bay, total dissolved solids levels exceed 3,000 mg/L. Therefore, Lower San Francisco Bay meets an exception to State Water Board Resolution 88-63. Alamo Canal exhibits freshwater conditions suitable to provide a good source of drinking water and support the municipal and domestic supply beneficial use. Beneficial uses applicable to Lower San Francisco Bay and Alamo Canal are as follows:

Table F-4. Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Lower San Francisco Bay	Industrial Service Supply (IND) Ocean, Commercial and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC-1) Non-Contact Water Recreation (REC-2) Navigation (NAV)
003	Alamo Canal	Municipal and Domestic Supply (MUN) Groundwater Recharge (GWR) Cold Freshwater Habitat (COLD) Preservation of Rare and Endangered Species (RARE) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contract Recreation (REC-1) Non-Contact Water Recreation (REC-2)

3.3.2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** The NTR and CTR contain federal water quality criteria for priority pollutants. U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 NTR criteria apply in California. U.S. EPA adopted the CTR on May 18, 2000. The CTR promulgated new toxics criteria for California and incorporated the NTR criteria that applied in the state. U.S. EPA amended the CTR on February 13, 2001.

3.3.3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP establishes implementation provisions for priority pollutant criteria and objectives, and provisions for chronic toxicity control. The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established through the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. Requirements of this Order implement the SIP.

3.3.4. **Bacteria Objectives.** The State Water Board adopted the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* on August 7, 2018, and it became effective on March 22, 2019. This plan

establishes enterococcus bacteria water quality objectives and related implementation provisions for discharges to marine and estuarine waters that support the water contact recreation beneficial use.

- 3.3.5. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. The State Water Board adopted amendments to the plan on June 5, 2018, that became effective on March 11, 2019. This plan establishes sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries.
- 3.3.6. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 require that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
- 3.3.7. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.
- 3.3.8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all applicable Endangered Species Act requirements.
- 3.3.9. **Sewage Sludge and Biosolids.** U.S. EPA administers 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge, which regulates the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a municipal wastewater treatment facility. This Order does not

authorize any act that violates those requirements. The Discharger is responsible for meeting applicable requirements of 40 C.F.R. part 503.

3.4. Impaired Water Bodies on CWA section 303(d) List. On April 6, 2018, U.S. EPA approved a revised list of impaired waters pursuant to CWA section 303(d), which requires identification of water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt total maximum daily loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for nonpoint sources and are established to achieve water quality standards.

Lower San Francisco Bay is listed as impaired by mercury, PCBs, dioxin-like PCBs, chlordane, DDT, dieldrin, dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, and trash. On February 12, 2008, U.S. EPA approved a TMDL for mercury in San Francisco Bay. On March 29, 2010, U.S. EPA approved a TMDL for PCBs in San Francisco Bay. NPDES Permit CA0038849 implements the mercury and PCBs TMDLs. As shown in Fact Sheet section 4.3.3, the discharge is not a significant source of chlordane, DDT, and dieldrin because these pollutants have not been detected in the discharge. The discharge is an insignificant source of dioxins and furans because concentrations of these pollutants in plant effluent are consistently below water quality objectives. The discharge is not a source of invasive species because it is disinfected. The discharge is also not a source of trash because it is screened and treated to at least secondary treatment standards.

Alamo Canal is not listed as impaired by any pollutant.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters.

4.1. Discharge Prohibitions

4.1.1. Prohibitions in this Order

4.1.1.1. Discharge Prohibition 3.1 (No discharge other than as described): This prohibition is based on 40 C.F.R. section 122.21(a) and Water Code section

13260, which require filing an application and Report of Waste Discharge before a discharge can occur. Discharges not described in the application and Report of Waste Discharge, and subsequently in this Order, are prohibited.

- 4.1.1.2. **Discharge Prohibition 3.2 (No bypass to waters of the United States):** This prohibition is based on 40 C.F.R. section 122.41(m) (see Attachment D section 1.7).
- 4.1.1.3. **Discharge Prohibition 3.3 (No discharge without minimum initial dilution of at least 75:1, or, after EBDA accepts Cargill brine, 72:1):** This prohibition is based on the Discharger's dilution study, *East Bay Dischargers Authority Common Outfall Summary of Dilution Modeling Conditions and Results* (April 2021). The study modeled mixing conditions and found a minimum initial dilution of 75:1, and a minimum initial dilution of 72:1 after EBDA accepts Cargill brine. Thus, after EBDA accepts Cargill brine in accordance with Order R2-2022-0023 (for the EBDA Common Outfall), this Order prohibits discharge without a minimum initial dilution of at least 72:1. This Order's water quality-based effluent limitations for ammonia and total residual chlorine are based on these initial dilutions. Therefore, this prohibition is necessary to ensure that this Order's effluent limitations remain protective of water quality.
- 4.1.1.4. **Discharge Prohibition 3.4 (No average dry weather influent flow above 20.2 MGD):** This prohibition is based on the plant's design treatment capacity (i.e., the historic and tested reliability of the treatment plant) of 17.0 MGD plus the 3.2 MGD of Zone 7 Water Agency reverse osmosis reject water added to the treated and disinfected effluent. Exceeding the average dry weather flow design capacity of 17.0 MGD influent flow could result in lowering the reliability of achieving compliance with requirements. Exceeding 3.2 MGD of reject water flow could exceed the capacity of the EBDA Common Outfall. Upon satisfying the conditions in Provision 6.3.5.4 of this Order, the Discharger may discharge a total average dry weather flow up to 23.9 MGD.
- 4.1.1.5. **Discharge Prohibition 3.5 (No sanitary sewer overflows to waters of the United States):** This prohibition is based on Discharge Prohibition 15 of Basin Plan Table 4-1 and the CWA, which prohibit the discharge of wastewater to surface waters, except as authorized under an NPDES permit. Publicly-owned treatment works must achieve secondary treatment at a minimum and any more stringent limitations necessary to meet water quality standards. A sanitary sewer overflow that results in the discharge to waters of the United States of raw sewage or wastewater not meeting this Order's effluent limitations is therefore prohibited under the Basin Plan and CWA.

- 4.1.1.6. **Discharge Prohibition 3.6 (No purified water flow above 0.5 MGD):** This Order prohibits purified water discharges greater than 0.5 MGD. This prohibition is necessary to ensure that the discharge is consistent with the description of the purified water pilot project and prevents potential erosion and turbidity in Alamo Canal during dry weather and flooding during wet weather.
- 4.1.2. **Basin Plan Discharge Prohibition 1.** Basin Plan Table 4-1, Discharge Prohibition 1, prohibits discharges of wastewater that do not receive a minimum of 10:1 initial dilution or discharges into any nontidal water, dead-end slough, or similar confined waters and their tributaries. The Discharger's purified water pilot project will discharge purified water through Discharge Point 003, an outfall to shallow waters where a minimum initial dilution of 10:1 is not achieved. However, Basin Plan section 4.2 provides for exceptions under certain circumstances:
- An inordinate burden would be placed on the Discharger relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means;
 - A discharge is approved as part of a reclamation project;
 - Net environmental benefits will be derived as a result of the discharge; or
 - A discharge is approved as part of a groundwater cleanup project.

The Basin Plan further states:

In reviewing requests for exceptions, the Water Board will consider the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequences of such discharges.

This Order grants an exception to Basin Plan Discharge Prohibition 1 because the discharge would be part of a reclamation project, where the Discharger would purify secondary-treated municipal wastewater to explore the feasibility and improve public perception of indirect potable reuse. The resulting discharge would recharge the Niles Cone Groundwater Basin under Alameda Creek to support drinking water supply.

4.2. Technology-Based Effluent Limitations

4.2.1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet water quality standards.

The discharges authorized by this Order must meet minimum federal technology-based requirements based on the secondary treatment standards at 40 C.F.R. section 133 as summarized below. Basin Plan Table 4-2 contains additional requirements for certain pollutants.

Table F-5. Secondary Treatment Standards

Parameter	Monthly Average	Weekly Average
Biochemical Oxygen Demand (BOD) ^[1,2]	30 mg/L	45 mg/L
Carbonaceous Biochemical Oxygen Demand (CBOD) ^[1,2]	25 mg/L	40 mg/L
Total Suspended Solids TSS ^[2]	30 mg/L	45 mg/L
pH	6.0 – 9.0 standard units	

Footnotes:

^[1] CBOD effluent limitations may be substituted for BOD limitations.

^[2] The monthly average percent removal, by concentration, is not to be less than 85 percent.

4.2.2. Technology-Based Effluent Limitations

- 4.2.2.1. **CBOD and TSS.** The CBOD and TSS effluent limitations, including the 85 percent removal requirement, are based on the secondary treatment standards and Basin Plan Table 4-2.
- 4.2.2.2. **pH.** The pH effluent limitations are based on the secondary treatment standards and Basin Plan Table 4-2.
- 4.2.2.3. **Total Residual Chlorine.** The total residual chlorine effluent limitation is based on Basin Plan Table 4-2. This technology-based effluent limitation will be replaced by a water quality-based effluent limitation (see Fact Sheet section 4.3.4.4) on the first day of the month following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031.

The Monitoring and Reporting Program (MRP, Attachment E) provides an allowance for determining false positives when using continuous devices based on the fact that continuous instruments occasionally have anomalous spikes, and it is chemically improbable to have free chlorine in the presence of sodium bisulfite. The allowance for using only on-the-hour measurements for mandatory minimum penalty assessment purposes under Water Code section 13385.1 is based on a 2004 strategy developed between the Regional Water Board and the Bay Area Clean Water Agencies.

4.3. Water Quality-Based Effluent Limitations

4.3.1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require permits to include limitations more stringent than federal technology-based requirements where

necessary to achieve water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, water quality-based effluent limitations (WQBELs) must be established using (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information. The process for determining reasonable potential and calculating WQBELs when necessary is intended to achieve applicable water quality objectives and criteria, and thereby protect designated beneficial uses of receiving waters.

4.3.2. **Beneficial Uses and Water Quality Criteria and Objectives**

Discharge Points 001 and 003 discharge to Lower San Francisco Bay and Alamo Canal. Fact Sheet section 3.3.1 identifies the beneficial uses of Lower San Francisco Bay and Alamo Canal. Water quality criteria and objectives to protect these beneficial uses are described below.

4.3.2.1. **Basin Plan Objectives.** The Basin Plan specifies numerous water quality objectives, including numeric objectives for 10 priority pollutants, un-ionized ammonia, temperature, total residual chlorine, and bacteria. In addition, the Basin Plan specifies numeric water quality objectives for total dissolved solids (TDS) and chlorides for Alameda Creek and its tributaries, including Alamo Canal. Because Alamo Canal exhibits freshwater conditions suitable for municipal or domestic supply, drinking water standards (i.e., maximum contaminant levels) are also water quality objectives. The Basin Plan also contains narrative objectives for toxicity and bioaccumulation.

4.3.2.1.1. **Ammonia.** Basin Plan section 3.3.20 contains water quality objectives for un-ionized ammonia of 0.025 mg/L (as nitrogen) as an annual median and 0.4 mg/L (as nitrogen) as a maximum for Lower San Francisco Bay and upstream waters, including Alamo Canal. Effluent and receiving water data are available for total ammonia, but not un-ionized ammonia, because (1) sampling and laboratory methods are unavailable to analyze for un-ionized ammonia, and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on pH, salinity, and temperature of the receiving water.

To translate the un-ionized ammonia objectives into total ammonia criteria, pH, salinity, and temperature data were obtained from the Regional Monitoring Program (RMP) station nearest the outfall (Yerba Buena,

BC10). The un-ionized fraction of the total ammonia was calculated using the following equations (*Ambient Water Quality Criteria for Ammonia (Saltwater)*—1989, EPA Publication 440/5-88-004, 1989):

$$\text{Fraction of un-ionized ammonia} = (1 + 10^{[pK - pH]})^{-1}$$

Where, for salinity less than 1 ppt:

$$pK = 0.09018 + 2729.92/T$$

T = temperature in Kelvin

Where, for salinity greater than 10 ppt:

$$pK = 9.245 + 0.116*(I) + 0.0324*(298-T) + 0.0415*(P)/T$$

I = molal ionic strength of saltwater = $19.9273*(S)/(1000-1.005109*S)$

S = salinity (parts per thousand)

T = temperature in Kelvin

P = pressure (one atmosphere)

The 90th percentile and median un-ionized ammonia fractions were then used to express the maximum and annual average un-ionized objectives as acute and chronic total ammonia criteria. This approach is consistent with U.S. EPA guidance on translating dissolved metal water quality objectives to total recoverable metal water quality criteria (U.S. EPA, 1996, *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion*, EPA Publication 823-B96-007). The equivalent acute and chronic total ammonia criteria are 10 mg/L and 1.3 mg/L (as nitrogen). For Alamo Canal, it was not possible to translate un-ionized ammonia objectives into total ammonia criteria because of insufficient receiving water data for salinity, temperature, and pH.

4.3.2.1.2. **Temperature.** Basin Plan section 3.3.17 contains the following temperature objectives for surface waters:

- The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.
- The temperature of any cold or warm freshwater habitat shall not be increased by more than 5°F (2.8°C) above natural receiving water temperature.

4.3.2.1.3. **Total Residual Chlorine.** On November 18, 2020, the Regional Water Board adopted Resolution R2-2020-0031 to amend the Basin Plan to eliminate the requirement for a technology-based effluent limit for chlorine of 0.0 mg/L, and to establish water quality objectives for chlorine and a

process to implement the new objectives through water quality-based effluent limits. Basin Plan section 3.3.23 contains the new objectives for marine, estuarine, and freshwater objectives, which are listed in the table below.

Table F-6. Chlorine Water Quality Objectives

Receiving Water Type	4-Day Average (mg/L)	1-Hour Average (mg/L)
Marine or Estuarine	0.0075	0.013
Freshwater	0.011	0.019

4.3.2.1.4. **Fecal Coliform Bacteria.** Basin Plan section 3.3.1 contains water quality objectives for fecal coliform bacteria to protect the shellfish harvesting beneficial use, which are a median value of less than 14 most probable number per 100 milliliters (MPN/100 mL) and a 90th percentile value of less than 43 MPN/100 mL.

4.3.2.1.5. **Total Dissolved Solids (TDS) and Chlorides.** Basin Plan Table 3-7 contains TDS and chlorides objectives for Alameda Creek and its tributaries above the Niles Cone Groundwater Basin, including Alamo Canal. These objectives, summarized in Table F-7, below, were derived to prevent surface water used for groundwater recharge during dry weather to degrade groundwater quality.

Table F-7. Water Quality Objectives for Alameda Creek and its Tributaries

Parameter	90-Day Arithmetic Mean (mg/L)	90-Day 90 th Percentile (mg/L)	Daily Maximum (mg/L)
TDS	250	360	500
Chlorides	60	100	250

4.3.2.1.6. **Toxicity.** The narrative toxicity objective (Basin Plan § 3.3.18) states, “All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. ...There shall be no chronic toxicity in ambient waters.”

This Order translates the narrative objective for chronic toxicity into a numeric criterion of 1.0 chronic toxicity unit (TUc). At 1.0 TUc, there is no observable detrimental effect when the indicator organism is exposed to 100 percent effluent; therefore, 1.0 TUc is a direct translation of the narrative objective into a number. Moreover, in U.S. EPA’s *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001; see section 3.3.3, “Step 3: Decision Criteria for Permit Limit Development”), U.S. EPA recommends that 1.0 TUc be used as a criterion continuous concentration (typically a four-day average). It further states

that reasonable potential is shown where an effluent is projected to cause an excursion above the criterion continuous concentration. This document applies here as guidance because it directly addresses effluent characterization for toxicity.

- 4.3.2.1.7. **Bioaccumulation and Dioxin-TEQ.** The narrative bioaccumulation objective (Basin Plan § 3.3.2) states, “Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.” Because it is the consensus of the scientific community that dioxins and furans associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms, the Basin Plan’s narrative bioaccumulation water quality objective applies to these pollutants. Elevated levels of dioxins and furans in San Francisco Bay fish tissue demonstrate that the narrative bioaccumulation water quality objective is not being met. U.S. EPA has therefore placed Central San Francisco Bay on its 303(d) list of receiving waters where water quality objectives are not being met after imposition of applicable technology-based requirements.

When the CTR was promulgated, U.S. EPA stated its support for the regulation of dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs). U.S. EPA stated, “For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme” (Fed. Reg. Vol. 65, No. 97, pages 31695-31696, May 18, 2000). This Order uses a TEQ scheme based on a set of toxicity equivalency factors (TEFs) the World Health Organization developed in 2005, and a set of bioaccumulation equivalency factors (BEFs) U.S. EPA developed for the Great Lakes region (40 C.F.R. § 132, Appendix F) to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD). Although the 2005 World Health Organization scheme includes TEFs for dioxin-like PCBs, they are not included in this Order’s TEQ scheme. The CTR has established a specific water quality criterion for PCBs, and dioxin-like PCBs are included in the analysis of total PCBs.

The CTR establishes a numeric water quality objective for 2,3,7,8-TCDD of 1.4×10^8 µg/L for the protection of human health when aquatic organisms are consumed. This CTR criterion is used as a criterion for dioxin TEQ because dioxin TEQ represents a toxicity-weighted

concentration equivalent to 2,3,7,8 TCDD, thus translating the narrative bioaccumulation objective into a numeric criterion.

- 4.3.2.2. **CTR Criteria.** The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of “water and organisms” and others are for consumption of “organisms only.” The criteria applicable to “organisms only” apply to Lower San Francisco Bay because it is not a source of drinking water. The criteria of “water and organisms” apply to Alamo Canal because it is a potential source of drinking water.
- 4.3.2.3. **NTR Criteria.** The NTR establishes numeric aquatic life and human health criteria for a number of toxic pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. The NTR criteria apply to Lower San Francisco Bay and Alamo Canal.
- 4.3.2.4. **Bacteria Objectives.** The *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* establishes enterococcus and *E. coli* bacteria water quality objectives to limit cases of gastrointestinal illness from water contact recreation. The enterococcus bacteria objectives apply to marine and estuarine waters and the *E. coli* bacteria objectives apply to freshwater.
- 4.3.2.5. **Sediment Quality Objectives.** The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* contains the following narrative water quality objectives:
- 4.3.2.5.1. “Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California.” This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.
- 4.3.2.5.2. “Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health in bays and estuaries of California.” This objective is to be implemented by a three-tiered procedure based on pollutant concentrations in sediment and fish tissue.
- 4.3.2.5.3. “Pollutants shall not be present in sediment at levels that alone or in combination are toxic to wildlife and resident finfish by direct exposure or bioaccumulate in aquatic life at levels that are harmful to wildlife or

resident finfish by indirect exposure in bays and estuaries of California.” This objective is to be implemented on a case-by-case basis, based upon an ecological risk assessment.

- 4.3.2.6. **Receiving Water Salinity.** Basin Plan section 4.6.2 (like the CTR and NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the water quality objectives are the lower of the salt or freshwater criteria (the latter calculated based on ambient hardness) for each substance.

Lower San Francisco Bay is marine based on salinity data collected through the RMP at the Yerba Buena sampling station (BC10) between 1993 and 2017. During that period, the average salinity was 26 ppt, with a range from 12 to 36 ppt. Because the salinity was greater than 10 ppt in 100 percent of the samples, the reasonable potential analysis and effluent limitations in this Order for the discharge to Lower San Francisco Bay are based on saltwater water quality objectives.

The Discharger did not collect salinity data for Alamo Canal. However, the receiving water is expected to be freshwater because it is not subject to tidal influence from Lower San Francisco Bay, which is over eight miles downstream.

- 4.3.2.7. **Metals Translators.** Regulations at 40 C.F.R. section 122.45(c), require effluent limitations for metals to be expressed as total recoverable metal. Since the water quality objectives for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR contains default translators; however, site-specific conditions, such as water temperature, pH, total suspended solids, and organic carbon may affect the form of metal (dissolved, non-filterable, or otherwise) present and therefore available to cause toxicity. In general, dissolved metals are more available and more toxic to aquatic life than other forms. Site-specific translators can account for site-specific conditions, thereby preventing overly stringent or under-protective water quality objectives.

For the discharge to Lower San Francisco Bay, CTR default translators were used for all metals other than copper, nickel and zinc. Basin Plan Table 7.2.1-2 sets forth site-specific copper translators. The Clean Estuary

Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (March 2005) contains similar translators for nickel. Additionally, this Order retains site-specific zinc translators from the previous order, which were calculated using RMP data collected between 1993 and 2003 at the Alameda RMP monitoring station (BB70) and two other Central San Francisco Bay stations near the EBDA Common Outfall (CB004W and CB006W). The site-specific copper, nickel, and zinc translators are listed below.

Table F-8. Site-Specific Translators

Parameter	Chronic Translator	Acute Translator
Copper	0.73	0.87
Nickel	0.65	0.85
Zinc	0.46	0.30

For the discharge to Alamo Canal, the CTR default translators were used.

4.3.3. Reasonable Potential Analyses

4.3.3.1. Discharge to Lower San Francisco Bay (Discharge Point 001)

- 4.3.3.1.1. **Available Information.** The reasonable potential analysis for the discharge to Lower San Francisco Bay is based on plant effluent data collected from July 2017 through December 2021 and ambient background data summarized in the RMP's *San Francisco Bay California Toxics Rule Priority Pollutant Ambient Water Monitoring Report* (2017), which includes data collected through the RMP at the Yerba Buena RMP station (BC10) from 1993 through 2017, supplemented by additional Bay Area Clean Water Agencies data from *San Francisco Bay Ambient Water Monitoring Interim Report* (2003) and *Ambient Water Monitoring: Final CTR Sampling Update* (2004).

SIP section 1.4.3 requires that background water quality data be representative of the ambient receiving water that will mix with the discharge. RMP monitoring station BC10, relative to other RMP stations, fits SIP guidance for establishing priority pollutant and ammonia background conditions at Discharge Point 001.

This Order does not contain WQBELs for constituents that do not demonstrate reasonable potential; however, the MRP still requires monitoring for those pollutants. If concentrations are found to have increased significantly, Provision 6.3.2 of the Order requires the Discharger to investigate the sources of the increases and implement remedial measures if the increases pose a threat to receiving water quality.

4.3.3.1.2. **Priority Pollutants, Ammonia, and Dioxin-TEQ.** SIP section 1.3 sets forth the methodology used to assess whether priority pollutants have reasonable potential to exceed CTR and NTR water quality objectives. Here, SIP section 1.3 is also used as guidance for ammonia and dioxin-TEQ. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

- **Trigger 1** is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective ($MEC \geq$ water quality objective).
- **Trigger 2** is activated if the ambient background concentration observed in the receiving water is greater than the lowest applicable water quality objective ($B >$ water quality objective) and the pollutant is detected in any effluent sample.
- **Trigger 3** is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

The maximum effluent concentrations, most stringent applicable water quality criteria and objectives, and ambient background concentrations used in the analysis are presented in the following table, along with the reasonable potential analysis results (yes, no, or unknown) for each pollutant. Based on this analysis, ammonia, copper, and cyanide exhibit reasonable potential by Trigger 1. Additionally, Basin Plan sections 7.2.1.2 and 4.7.2.2 require copper and cyanide WQBELs for all individual NPDES permits for municipal wastewater treatment facilities (Trigger 3). Dioxin-TEQ exhibits reasonable potential by Triggers 2 and 3 because it is present in the discharge and the receiving water is impaired for dioxin-TEQ.

Table F-9. Reasonable Potential Analysis for Various Pollutants

CTR No.	Pollutant	C or Governing Criterion or Objective ($\mu\text{g/L}$)	MEC or Minimum DL ($\mu\text{g/L}$) ^{[1][2]}	B or Minimum DL ($\mu\text{g/L}$) ^{[1][2]}	RPA Result ^[3]
1	Antimony	4,300	0.49	1.8	No
2	Arsenic	36	1.3	2.5	No
3	Beryllium	No Criterion	<0.035	0.22	U

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CTR No.	Pollutant	C or Governing Criterion or Objective (µg/L)	MEC or Minimum DL (µg/L) ^{[1][2]}	B or Minimum DL (µg/L) ^{[1][2]}	RPA Result ^[3]
4	Cadmium	9.36	0.23	0.13	No
5a	Chromium (III) ^[4]	No Criterion	1.1	4.4	U
5b	Chromium (VI)	50	1.1	4.4	No
6	Copper	8.2	10	2.5	Yes
7	Lead	8.5	0.36	0.80	No
8	Mercury ^[5]	-	-	-	-
9	Nickel	13	7.7	3.7	No
10	Selenium	5.0	1.0	0.39	No
11	Silver	2.2	0.082	0.052	No
12	Thallium	6.3	<0.025	0.023	No
13	Zinc	196	32	5.1	No
14	Cyanide	2.9	3.1	0.52	Yes
15	Asbestos (fibers/L) ^[6]	-	-	-	U
16	2,3,7,8-TCDD	1.4 x 10 ⁻⁸	<2.3 x 10 ⁻⁷	2.7 x 10 ⁻⁸	U
	Dioxin-TEQ	1.4 x 10⁻⁸	11.1 x 10⁻⁹ DNQ	4.1 x 10⁻⁸	Yes ^[7]
17	Acrolein	780	<0.94	<0.50	No
18	Acrylonitrile	0.66	<0.39	0.030	No
19	Benzene	71	<0.10	<0.050	No
20	Bromoform	360	<0.18	<0.15	No
21	Carbon Tetrachloride	4.4	<0.14	0.060	No
22	Chlorobenzene	21,000	<0.12	<0.18	No
23	Chlorodibromomethane	34	<0.13	<0.05	No
24	Chloroethane	No Criterion	<0.18	<0.38	U
25	2-Chloroethylvinyl ether	No Criterion	<0.25	<0.28	U
26	Chloroform	No Criterion	1.1	<0.19	U
27	Dichlorobromomethane	46	<0.20	<0.050	No
28	1,1-Dichloroethane	No Criterion	<0.13	<0.050	U
29	1,2-Dichloroethane	99	<0.14	0.040	No
30	1,1-Dichloroethylene	3.2	<0.19	<0.21	No
31	1,2-Dichloropropane	39	<0.13	<0.050	No
32	1,3-Dichloropropylene	1,700	<0.18	<0.16	No
33	Ethylbenzene	29,000	<0.13	<0.26	No
34	Methyl Bromide	4,000	<0.23	<0.30	No
35	Methyl Chloride	No Criterion	<0.32	<0.30	U
36	Methylene Chloride	1,600	<0.24	22	No
37	1,1,2,2-Tetrachloroethane	11	<0.12	<0.050	No
38	Tetrachloroethylene	8.9	<0.18	<0.050	No
39	Toluene	200,000	0.55	<0.19	U
40	1,2-Trans-Dichloroethylene	140,000	<0.19	<0.22	No
41	1,1,1-Trichloroethane	No Criterion	<0.16	<0.19	No

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CTR No.	Pollutant	C or Governing Criterion or Objective (µg/L)	MEC or Minimum DL (µg/L) ^{[1][2]}	B or Minimum DL (µg/L) ^{[1][2]}	RPA Result ^[3]
42	1,1,2-Trichloroethane	42	<0.20	<0.050	No
43	Trichloroethylene	81	<0.16	<0.20	No
44	Vinyl Chloride	525	<0.090	<0.25	No
45	2-Chlorophenol	400	<0.18	<0.70	No
46	2,4-Dichlorophenol	790	<0.17	<0.90	No
47	2,4-Dimethylphenol	2,300	<0.11	<0.80	No
48	2-Methyl- 4,6-Dinitrophenol	765	<0.94	<0.60	No
49	2,4-Dinitrophenol	14,000	<0.62	<0.70	No
50	2-Nitrophenol	No Criterion	<0.84	<0.80	U
51	4-Nitrophenol	No Criterion	<0.097	<0.50	U
52	3-Methyl 4-Chlorophenol	No Criterion	<0.19	<0.80	U
53	Pentachlorophenol	7.9	<1.8	<0.60	No
54	Phenol	4,600,000	<0.085	<0.50	No
55	2,4,6-Trichlorophenol	6.5	<0.80	<0.97	No
56	Acenaphthene	2,700	0.034 DNQ	0.0020	No
57	Acenaphthylene	No Criterion	0.020 DNQ	0.0010	U
58	Anthracene	110,000	<0.010	0.0010	No
59	Benzidine	0.00054	<1.6	<0.00030	U
60	Benzo(a)Anthracene	0.049	<0.0077	0.0050	No
61	Benzo(a)Pyrene	0.049	<0.011	0.0020	No
62	Benzo(b)Fluoranthene	0.049	<0.0092	0.0050	No
63	Benzo(ghi)Perylene	No Criterion	<0.0079	0.0030	U
64	Benzo(k)Fluoranthene	0.049	<0.0064	0.0020	No
65	Bis(2-Chloroethoxy)Methane	No Criterion	<0.40	<0.30	U
66	Bis(2-Chloroethyl)Ether	1.4	<0.16	<0.30	No
67	Bis(2-Chloroisopropyl)Ether	170,000	<0.12	<0.60	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	<3.6	<0.50	No
69	4-Bromophenyl Phenyl Ether	No Criterion	<0.13	<0.23	U
70	Butylbenzyl Phthalate	5,200	1.6 DNQ	<0.50	No
71	2-Chloronaphthalene	4,300	<0.094	<0.30	No
72	4-Chlorophenyl Phenyl Ether	No Criterion	<0.11	<0.30	U
73	Chrysene	0.049	<0.0081	0.0020	No
74	Dibenzo(a,h)Anthracene	0.049	<0.0092	0.0010	No
75	1,2-Dichlorobenzene	17,000	<0.13	<0.27	No
76	1,3-Dichlorobenzene	2,600	<0.17	<0.18	No
77	1,4-Dichlorobenzene	2,600	<0.15	<0.18	No
78	3,3 Dichlorobenzidine	0.077	<0.25	<0.00020	U
79	Diethyl Phthalate	120,000	<0.092	<0.20	No
80	Dimethyl Phthalate	2,900,000	<0.11	<0.20	No
81	Di-n-Butyl Phthalate	12,000	0.10 DNQ	<0.50	No
82	2,4-Dinitrotoluene	9.1	<0.12	<0.27	No

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CTR No.	Pollutant	C or Governing Criterion or Objective (µg/L)	MEC or Minimum DL (µg/L) ^{[1][2]}	B or Minimum DL (µg/L) ^{[1][2]}	RPA Result ^[3]
83	2,6-Dinitrotoluene	No Criterion	<0.14	<0.29	U
84	Di-n-Octyl Phthalate	No Criterion	<0.089	<0.38	U
85	1,2-Diphenylhydrazine	0.54	<0.13	0.0040	No
86	Fluoranthene	370	0.042 DNQ	0.011	No
87	Fluorene	14,000	<0.015	0.002	No
88	Hexachlorobenzene	0.00077	<0.11	0.000020	U
89	Hexachlorobutadiene	50	<0.092	<0.30	No
90	Hexachlorocyclopentadiene	17,000	<0.18	<0.30	No
91	Hexachloroethane	8.9	<0.10	<0.20	No
92	Indeno(1,2,3-cd)Pyrene	0.049	<0.085	0.0040	No
93	Isophorone	600	<0.13	<0.30	No
94	Naphthalene	No Criterion	<0.017	0.0090	U
95	Nitrobenzene	1,900	<0.11	<0.25	No
96	N-Nitrosodimethylamine	8.1	<0.08	<0.30	No
97	N-Nitrosodi-n-Propylamine	1.4	<0.18	<0.00020	No
98	N-Nitrosodiphenylamine	16	<0.096	<0.0010	No
99	Phenanthrene	No Criterion	<0.014	0.0060	U
100	Pyrene	11,000	<0.01	0.019	No
101	1,2,4-Trichlorobenzene	No Criterion	<0.12	<0.30	No
102	Aldrin	0.00014	<0.002	<0.0000085	U
103	Alpha-BHC	0.013	<0.0029	0.00050	No
104	Beta-BHC	0.046	<0.0029	0.00040	No
105	Gamma-BHC	0.063	<0.0019	0.0010	No
106	Delta-BHC	No Criterion	<0.0029	0.00010	U
107	Chlordane	0.00059	<0.014	0.00014	U
108	4,4'-DDT	0.00059	<0.003	0.00020	U
109	4,4'-DDE	0.00059	<0.0029	0.0010	U
110	4,4'-DDD	0.00084	<0.0019	0.00030	U
111	Dieldrin	0.00014	<0.0039	0.00030	U
112	Alpha-Endosulfan	0.0087	<0.0030	0.00010	No
113	beta-Endosulfan	0.0087	<0.0030	0.00010	No
114	Endosulfan Sulfate	240	<0.0019	0.00010	No
115	Endrin	0.0023	<0.0029	0.000040	U
116	Endrin Aldehyde	0.81	<0.0039	<0.0050	No
117	Heptachlor	0.00021	<0.0029	0.000020	U
118	Heptachlor Epoxide	0.00011	<0.0029	0.00010	U
119-125	PCBs sum ^[5]	-	-	-	-
126	Toxaphene	0.00020	<0.070	<0.00000082	U
	Total Ammonia	1.3	41	0.43	Yes

Footnotes:

- [1] The MEC and ambient background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (MDL).
- [2] The MEC or ambient background concentration is "Unavailable" when there are no monitoring data for the constituent.
- [3] RPA Results = Yes, if MEC \geq WQC, B > WQC and MEC is detected, or Trigger 3
 = No, if MEC and B are < WQC or all effluent data are undetected
 = Unknown (U) if no criteria have been promulgated or data are insufficient.
- [4] The maximum effluent and ambient background concentrations are the total chromium concentration. The chromium (III) and chromium (VI) concentrations are unknown but less than these values.
- [5] SIP section 1.3 excludes from its reasonable potential analysis procedure priority pollutants for which a TMDL has been developed. TMDLs have been developed for mercury and PCBs in San Francisco Bay. Mercury and PCBs from wastewater discharges are regulated by NPDES Permit CA0038849, which implements the San Francisco Bay Mercury and PCBs TMDLs.
- [6] Asbestos sampling is only required for discharges to waters with the municipal or domestic supply (MUN) beneficial use. Lower San Francisco Bay does not have the MUN beneficial use.
- [7] Reasonable potential is based on Triggers 2 and 3 because San Francisco Bay is 303(d)-listed for dioxin-TEQ and elevated levels of dioxin-TEQ are found in San Francisco Bay fish tissue. Dioxin-TEQ is also present in the discharge.

4.3.3.1.3. Total Residual Chlorine. Basin Plan Table 4-2 requires a total residual chlorine effluent limitation for all treatment facilities with the potential to discharge chlorine. Following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031, a water quality-based effluent limitation for total residual chlorine will be required because the Facility disinfects its effluent with chlorine and, without sufficient dichlorination, the discharge could contain chlorine above the new water quality objective.

4.3.3.1.5. Enterococcus and *E. coli* Bacteria. The *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* requires *Enterococcus* bacteria effluent limitations for discharges to marine and estuarine receiving waters and *E. coli* bacteria effluent limitations for discharges to freshwater receiving waters that support the water contact recreation (REC1) beneficial use.

4.3.3.1.5. Fecal Coliform Bacteria. Basin Plan Table 4-2A requires total coliform effluent limitations for discharges to receiving waters that support the shellfish harvesting beneficial use. Footnote f allows substitution with fecal coliform limits provided that doing so will not result in unacceptable adverse impacts on beneficial uses (i.e., shellfish harvesting).

4.3.3.1.6. Chronic Toxicity. There is no reasonable potential for chronic toxicity in the receiving water, and no WQBEL is required. The *Technical Support Document for Water Quality-based Toxics Control* allows for dilution credits to be considered when conducting a reasonable potential analysis. This Order establishes a chronic toxicity dilution credit of 10:1 (D = 9) consistent with Basin Plan section 4.5.5.3.2, which allows chronic toxicity dilution credits "comparable to those allowed for numeric chemical-specific objectives." Fact Sheet section 4.3.4.2.2 establishes a comparable dilution credit of 10:1 for several non-bioaccumulative pollutants.

During the previous order term, the Discharger conducted chronic toxicity tests at least quarterly. The maximum single-sample chronic toxicity result was 3.2 TUc. Applying the dilution credit of 10:1 to 3.2 TUc results in toxicity less than the translated chronic toxicity objective (1.0 TUc).

- 4.3.3.1.7. **Acute Toxicity.** Basin Plan section 4.5.5.3.1 requires acute toxicity monitoring and limitations, implying there is reasonable potential for the discharge to cause or contribute to exceedances of the acute toxicity water quality objective.
- 4.3.3.1.8. **Sediment Quality.** Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore, the Regional Water Board cannot draw a conclusion about reasonable potential for these discharges to cause or contribute to exceedances of the sediment quality objectives. Nevertheless, the Discharger continues to participate in the RMP, which routinely monitors San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality.
- 4.3.3.2. **Discharge to Alamo Canal (Discharge Point 003).** Discharges from the proposed purified water pilot project will be purified using reverse osmosis as described in Fact Sheet section 2.1.3.3; therefore, all chemical pollutants should be removed, resulting in no reasonable potential to cause or contribute to exceedances of water quality objectives. This Order requires the Discharger to monitor purified water discharges to confirm this finding. As discussed further below, total residual chlorine is an exception. Temperature and total dissolved solids (TDS) and chlorides are also discussed further below.
- 4.3.3.2.1. **Total Residual Chlorine.** Following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031, a water quality-based effluent limitation for total residual chlorine may be necessary. Basin Plan Table 4-2 requires a total residual chlorine effluent limitation for all treatment facilities with the potential to discharge chlorine. Because the purified water pilot project will purify chlorinated wastewater, there may be reasonable potential for the purified water discharges to cause or contribute to exceedances of the total residual chlorine water quality objectives.
- 4.3.3.2.2. **Temperature.** Alamo Canal supports warm water and cold water habitat beneficial uses; therefore, the temperature water quality objectives in Basin Plan section 3.3.17 apply. Receiving water monitoring and monitoring from LAVWMA's effluent that the Discharger conducted in May 2020 showed no significant difference in temperature between effluent

and the upstream monitoring stations in Alamo Canal. LAVWMA's effluent temperature was within 2.8°C of the ambient temperature. It is unlikely for the effluent temperature to significantly change after the Discharger purifies LAVWMA's wastewater. Therefore, there is no reasonable potential for the discharge to alter natural receiving water temperatures or increase the ambient temperatures by greater than 2.8°C.

- 4.3.3.2.3. **TDS and Chlorides.** Alamo Canal is a tributary to Alameda Creek located above the Niles Cone Groundwater Basin; therefore, the TDS and chlorides objectives in Basin Plan Table 3-7 apply. The proposed discharge to Alamo Canal will not contain TDS or chlorides. In fact, the Discharger's purified water pilot project is intended to replenish the Niles Cone Groundwater Basin underneath Alameda Creek. Therefore, there is no reasonable potential for TDS or chlorides to exceed water quality objectives.

4.3.4. **Water Quality-Based Effluent Limitations — Discharge Point 001**

WQBELs were developed for the pollutants determined to have reasonable potential to cause or contribute to exceedances of water quality objectives. For Discharge Point 001, the WQBEL calculations are based on the procedures in SIP section 1.4, with the exception of acute toxicity, total residual chlorine, *Enterococcus* bacteria, and fecal coliform bacteria (discussed below).

- 4.3.4.1. **WQBEL Expression.** NPDES regulations at 40 C.F.R. section 122.45(d) require that permit limits for publicly-owned treatment works be expressed as average weekly and average monthly limits, unless impracticable. This Order contains daily limits instead of weekly limits because daily limits better protect against acute water quality effects and are necessary to prevent fish kills or mortality to aquatic organisms. Weekly limits could allow acute and chronic toxicity to occur over shorter periods (acute and chronic aquatic life criteria are typically expressed as one-hour and four-day averages).
- 4.3.4.2. **Mixing Zones and Dilution Credits.** The Basin Plan and SIP allow mixing zones and dilution credits under certain circumstances. The Discharger's dilution study, *Technical Support for Dilution Credits and Calculation of Effluent Limitations based on Chlorine Acute Water Quality Objective* (April 2021), supplemented by information in its Report of Waste Discharge (September 2021), estimated mixing at Discharge Point 001 using the CORMIX 11 mixing zone model to evaluate near-field mixing (i.e., mixing resulting from the initial momentum and buoyancy of the discharge upon exiting the outfall). The study is conservatively based on the Discharger's current peak discharge flow (acute conditions) and modeled dilution under current discharge conditions and future discharge conditions after the Discharger begins discharging Cargill brine (see Provision 6.3.5.1). The following table summarizes the modeling results:

Table F-10. Minimum Initial Discharge Dilution

Condition	Discharge Flow (MGD)	Dilution ^[3]
Current Acute	126.9 ^[1] (secondary-treated effluent)	75:1
Future Acute	128.9 ^[2] (secondary-treated effluent + brine)	72:1

Footnotes:

^[1] This flow is the sum of the contracted maximum flows the EBDA member agencies can discharge through the EBDA pipeline.

^[2] This flow is the sum of the maximum contracted flow the EBDA member agencies can discharge through the EBDA pipeline plus 2 MGD of Cargill brine.

^[3] These dilution ratios compare the total receiving water volume after mixing to the effluent volume within that total.

- 4.3.4.2.1. **Bioaccumulative Pollutants.** For certain bioaccumulative pollutants, no mixing zone is established and dilution credit is denied. Specifically, these pollutants include dioxin and furan compounds, which appear on the CWA section 303(d) list for Lower San Francisco Bay because, based on available data on the concentrations of these pollutants in aquatic organisms, sediment, and the water column, they impair Lower San Francisco Bay beneficial uses. The following factors suggest insufficient assimilative capacity in San Francisco Bay for these pollutants.

Tissue samples taken from San Francisco Bay fish show the presence of these pollutants at concentrations greater than screening levels (Contaminant Concentrations in Fish from San Francisco Bay, May 1997). The results of a 1994 San Francisco Bay pilot study, presented in Contaminated Levels in Fish Tissue from San Francisco Bay (Regional Water Board, 1994) also show elevated levels of chemical contaminants in fish tissues. The Office of Environmental Health and Hazard Assessment completed a preliminary review of the data in the 1994 report and in December 1994 issued an interim consumption advisory covering certain fish species in San Francisco Bay due to the levels of some of these pollutants. The Office of Environmental Health and Hazard Assessment updated this advisory in a May 2011 report, Health Advisory and Safe Eating Guidelines for San Francisco Bay Fish and Shellfish, which still suggests insufficient assimilative capacity in San Francisco Bay for 303(d)-listed pollutants. Therefore, dilution credits are denied for bioaccumulative pollutants on the 303(d) list for which data are lacking on sources and significant uncertainty exists about how different sources contribute to bioaccumulation.

- 4.3.4.2.2. **Non-Bioaccumulative Pollutants (except ammonia and total residual chlorine).** For non-bioaccumulative pollutants (except ammonia and total residual chlorine), mixing zones corresponding to a conservative dilution credit of 10:1 (D=9) have been established. The 10:1 dilution credit is based, in part, on Basin Plan Prohibition 1 (Table 4-1), which prohibits

discharges with less than 10:1 dilution. SIP section 1.4.2 allows for limiting the dilution credit. The dilution credit is limited for the following reasons:

- 4.3.4.2.2.1. San Francisco Bay is a complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs. SIP section 1.4.3 allows background conditions to be determined on a discharge-by-discharge or water body-by-water body basis. A water body-by-water body approach is taken here due to inherent uncertainties in characterizing ambient background conditions in a complex estuarine system on a discharge-by-discharge basis.
- 4.3.4.2.2.2. Because of the complex hydrology of San Francisco Bay, there are uncertainties in accurately determining an appropriate mixing zone. The models used to predict dilution do not consider the three-dimensional nature of San Francisco Bay currents resulting from the interaction of tidal flushes and seasonal freshwater outflows. Being heavier and colder than freshwater, ocean saltwater enters San Francisco Bay on a twice-daily tidal cycle, generally beneath the warmer fresh water that flows seaward. When these waters mix and interact, complex circulation patterns occur due to the varying densities of the fresh and ocean waters. The locations of this mixing and interaction change depending on the strength of each tide. Additionally, sediment loads from the Central Valley change on a long-term basis, affecting the depth of different parts of San Francisco Bay, resulting in alteration of flow patterns, mixing, and dilution at the outfall.
- 4.3.4.2.3. **Ammonia and Total Residual Chlorine.** For ammonia and total residual chlorine, a mixing zone corresponding to a conservative estimate of actual initial dilution of 75:1 ($D=74$) is established for discharges before the Discharger accepts Cargill brine, and 72:1 ($D=71$) is established for discharges after the Discharger accepts Cargill brine. This is justified because ammonia and chlorine are both non-persistent pollutants that quickly disperse and degrade. Cumulative toxicity associated with ammonia and chlorine from other unrelated discharges is unlikely.
- 4.3.4.3. **WQBEL Calculations.** The following tables show the copper, cyanide, dioxin-TEQ, and ammonia WQBEL calculations in accordance with SIP section 1.4.

Table F-11. WQBEL Calculations –Copper, Cyanide, and Dioxin-TEQ

Pollutant	Copper	Cyanide	Dioxin-TEQ
Units	µg/L	µg/L	µg/L
Basis and Criteria type	Basin Plan and CTR Aquatic Life	Basin Plan and CTR Aquatic Life	Basin Plan Narrative Objective
Aquatic Life Criteria - Acute	-	-	-
Aquatic Life Criteria - Chronic	-	-	-
Site-Specific Objective Criteria - Acute	10.8	9.4	-
Site-Specific Objective Criteria - Chronic	8.2	2.9	-
Water Effects Ratio (WER)	1	1	1
Lowest WQO	8.2	2.9	-
Site Specific Translator - MDEL	0.87	-	-
Site Specific Translator - AMEL	0.73	-	-
Dilution Factor (D)	9	9	0
No. of samples per month	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	N
HH criteria analysis required? (Y/N)	N	Y	Y
Applicable Acute WQO	10.8	9.4	-
Applicable Chronic WQO	8.2	2.9	-
HH Criteria	-	220,000	1.4×10^{-8}
Background (Maximum Conc. for Aquatic Life Calc.)	2.5	0.52	3.1×10^{-8}
Background (Average Conc. for Human Health Calc.)	-	0.42	2.2×10^{-8}
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	N	Y
ECA Acute	85	89	-
ECA Chronic	59	24	-
ECA HH	-	2,200,000	1.4×10^{-8}
No. of data points <10 or at least 80% of data reported non-detect? (Y/N)	N	N	Y
Avg of effluent data points	7.1	1.3	5.8×10^{-9}
Std Dev of effluent data points	1.1	0.79	6.5×10^{-9}
CV Calculated	0.15	0.61	N/A
CV (Selected) - Final	0.15	0.61	0.60
ECA Acute Mult99	0.71	0.32	-
ECA Chronic Mult99	0.84	0.52	-
LTA Acute	60	29	-
LTA Chronic	49	13	-
Minimum of LTAs	49	13	-

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Pollutant	Copper	Cyanide	Dioxin-TEQ
AMEL Mult95	1.1	1.6	1.6
MDEL Mult99	1.4	3.1	3.1
AMEL (Aquatic Life)	56	20	-
MDEL (Aquatic Life)	70	40.0	-
MDEL/AMEL Multiplier	1.25	2.0	2.0
AMEL (Human Health)	-	2,200,000	1.4×10^{-8}
MDEL (Human Health)	-	4,400,000	2.8×10^{-8}
Minimum of AMEL for Aq. Life vs HH	53	20	-
Minimum of MDEL for Aq. Life vs HH	70	40.0	-
Previous Order Limit - AMEL	53	21	1.4×10^{-8}
Previous Order Limit - MDEL	69	40	2.8×10^{-8}
Final Limit - AMEL	53	20	1.4×10^{-8}
Final Limit - MDEL	69	40	2.8×10^{-8}

Table F-12. WQBEL Calculations – Ammonia

Pollutant	Total Ammonia (acute) Pre-Brine	Total Ammonia (chronic) Pre-Brine	Total Ammonia (acute) Post-Brine	Total Ammonia (chronic) Post-Brine
Units	mg/L	mg/L	mg/L	mg/L
Basis and Criteria type	Basin Plan Aquatic Live	Basin Plan Aquatic Live	Basin Plan Aquatic Live	Basin Plan Aquatic Live
Aquatic Life Criteria - Acute	10	-	10	-
Aquatic Life Criteria - Chronic	-	1.3	-	1.3
Site-Specific Objective Criteria - Acute	-	-	-	-
Site-Specific Objective Criteria - Chronic	-	-	-	-
Water Effects Ratio (WER)	1	1	1	1
Lowest WQO	10	1.3	10	1.3
Site Specific Translator - MDEL	-	-	-	-
Site Specific Translator - AMEL	-	-	-	-
Dilution Factor (D)	74	74	71	71
No. of samples per month	4	30 ^[1]	4	30 ^[1]
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	N
Applicable Acute WQO	10	-	10	-
Applicable Chronic WQO	-	1.3	-	1.3
HH Criteria				
Background (Maximum Conc. for Aquatic Life Calc.)	0.43	0.12	0.43	0.12
Background (Average Conc. for Human Health Calc.)				

Pollutant	Total Ammonia (acute) Pre-Brine	Total Ammonia (chronic) Pre-Brine	Total Ammonia (acute) Post-Brine	Total Ammonia (chronic) Post-Brine
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	N	N	N
ECA Acute	750	-	720	
ECA Chronic	-	85	-	81
ECA HH				
No. of data points <10 or at least 80% of data reported non-detect? (Y/N)	N	N	N	N
Avg of effluent data points	33	33	33	33
Std Dev of effluent data points	3.7	3.7	3.7	3.7
CV Calculated	0.11	0.11	0.11	0.11
CV (Selected) - Final	0.11	0.11	0.11	0.11
ECA Acute Mult99	0.78	-	0.78	-
ECA Chronic Mult99	-	0.99	-	0.99
LTA Acute	580		560	
LTA Chronic		84		80
Minimum of LTAs	580	84	560	80
AMEL Mult95	1.1	1.0	1.1	1.0
MDEL Mult99	1.3	1.3	1.3	1.3
AMEL (Aquatic Life)	640	86	610	83
MDEL (Aquatic Life)	750	110	730	100
MDEL/AMEL Multiplier	1.2	1.3	1.2	1.3
AMEL (Human Health)				
MDEL (Human Health)				
Minimum of AMEL for Aq. Life vs HH	640	86	610	83
Minimum of MDEL for Aq. Life vs HH	750	110	720	100
Previous Order Limit - AMEL	91	91	91	91
Previous Order Limit - MDEL	120	120	120	120
Final Limit - AMEL	[2]	86	[2]	83 [3]
Final Limit - MDEL	[2]	110	[2]	100 [3]

Footnotes:

[1] Statistical adjustments were made to the total ammonia WQBEL calculations. The SIP assumes a 4-day average concentration and a monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria, but the Basin Plan chronic water quality objective for un-ionized ammonia is based on an annual median instead of the typical 4-day average. Therefore, a 365-day average and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for the chronic criteria is longer than 30 days) were used. These statistical adjustments are supported by U.S. EPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia* (64 Fed. Reg. 71974-71980, December 22, 1999).

[2] The final total ammonia WQBELs are based on the chronic water quality objective because they result in lower effluent concentrations.

^[3] These WQBELs will replace the pre-brine total ammonia WQBELs when Provision 6.3.5.1 (Commencement of Cargill Brine Discharge) of Order R2-2022-0023 is satisfied.

- 4.3.4.4. **Total Residual Chlorine.** The total residual chlorine effluent limitation is based on Basin Plan Table 4-2. Following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2-2020-0031, this technology-based effluent limitation will be replaced by a water quality-based effluent limitation. For the water quality-based effluent limitation, this Order establishes a mixing zone corresponding to initial dilutions of 75:1 (D=74, pre-brine discharge) and 72:1 (D=71, post-brine discharge) to calculate the total residual chlorine effluent limitation (see Fact Sheet section 4.3.4.2.3). This Order uses a simplified equation from SIP section 1.4 because background concentrations for total residual chlorine are assumed to be zero:

$$ECA = (D+1) * C$$

where:

ECA = Effluent Concentration Allowance (effluent limitation)

C = Water quality objective (0.013 mg/L)

D = Dilution factor (D=74 pre-brine, D=71 post-brine)

This calculation results in a one-hour average effluent limitation of 0.98 mg/L before the Discharger accepts Cargill brine, and a one-hour average effluent limitation of 0.94 mg/L after the Discharger accepts Cargill brine.

- 4.3.4.5. **Enterococcus Bacteria.** The enterococcus effluent limitations are based on the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy*. This Order establishes a mixing zone corresponding to an initial dilution of 10:1 (D=9) to calculate the enterococcus effluent limitation (see Fact Sheet section 4.3.4.2.1). To establish background conditions, the Discharger collected two enterococcus receiving water samples near its outfall. The maximum sample result was 2 CFU/100 mL.

The enterococcus effluent limitation was calculated using the following equation as specified in SIP section 1.4:

$$ECA = C + D*(C - B)$$

where:

ECA = Effluent Concentration Allowance (effluent limitation)

C = Water quality objective (30 CFU/100 mL, 110 CFU/100mL)

D = Dilution factor (D=9)

B = Background concentration (2 CFU/100 mL)

This calculation results in a six-week rolling geometric mean enterococcus effluent limitation of 280 CFU/100 mL and a limitation of no more than 10 percent of enterococcus samples in a calendar month exceeding 1,100 CFU/100mL.

- 4.3.4.6. **Fecal Coliform Bacteria.** Order includes fecal coliform effluent limitations based on Basin Plan Table 4-2A footnote f substituting total coliform limitations with fecal coliform limitations).

The Discharger's study, *Study to Verify Protectiveness of Alternative Fecal Coliform Limits, Final Report* (February 22, 2011), verified that alternate fecal coliform limitations do not adversely affect beneficial uses in Lower San Francisco Bay. The study was conducted when the Discharger was complying with the fecal coliform limitations. It showed that, at the same time, water quality objectives were met in the receiving water. For fecal coliform, the maximum single concentration was 17 MPN/100 mL and the maximum median concentration was 2 MPN/100 mL in the receiving water. These concentrations were well below the fecal coliform water quality objectives for shellfish harvesting (90th percentile no greater than 43 MPN/100 mL and monthly median no greater than 14 MPN/100 mL). Therefore, consistent with Basin Plan Table 4-2A, this Order retains the previous effluent limitations for fecal coliform of 500 MPN/100 mL (monthly geometric mean) and 1,100 MPN/100 mL (11-sample 90th percentile) because they are protective of the shellfish harvesting beneficial use.

- 4.3.4.7. **Acute Toxicity.** This Order includes acute toxicity effluent limitations based on Basin Plan Table 4-3. Based on Basin Plan section 3.3.20, if the Discharger can demonstrate that ammonia causes acute toxicity in excess of the acute toxicity limitations in this Order, and that the ammonia in the discharge complies with the ammonia effluent limitations in this Order, then such toxicity does not constitute a violation of the effluent limitations for whole effluent acute toxicity.

4.3.5. **Water Quality-Based Effluent Limitations — Discharge Point 003**

WQBELs were developed for total residual chlorine because it may have reasonable potential to cause or contribute to exceedances of water quality objectives in Alamo Canal. Following U.S. EPA approval of the chlorine water quality objectives set forth in Regional Water Board Resolution R2 2020-0031, the total residual chlorine effluent limitation will be based on Basin Plan Table 4-2. The technology-based effluent limitation of 0.0 mg/L will be replaced by the water quality-based effluent limitation of 0.019 mg/L, based on the 1-hour objective for freshwater contained in Basin Plan section 3.3.23 (see Table F-6 of this Order).

4.4. Discharge Requirement Considerations

- 4.4.1. **Anti-Backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4), and 40 C.F.R. section 122.44(l), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous order.

This Order contains new enterococcus effluent limitations based on the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy*. The new effluent limitations are expressed using different averaging periods than the previous limits and are therefore not directly comparable. Otherwise, this Order contains effluent limitations as stringent as the previous order.

- 4.4.2. **Antidegradation.** This Order complies with the antidegradation provisions of 40 C.F.R. section 131.12 (federal policy) and State Water Board Resolution 68-16 (state policy). Permitted discharges must be consistent with these policies. This Order does not decrease the quality nor increase the quantity of the Discharger's discharges to Lower San Francisco Bay.

The previous order authorized increasing the total average dry weather flow to Discharge Point 001 to 119.1 MGD, concluding that the Discharger's proposed flow increase of 3.7 MGD would not degrade water quality. The Discharger's *Anti-Degradation Analysis for Proposed Wastewater Treatment Plant Discharge* (June 2, 2006) found that the overall flow increase would increase maximum annual pollutant loads from all dischargers to San Francisco Bay by less than 0.15 percent. This increase would not be observable, particularly considering the continuous tidal mixing and flushing that occurs and the size of San Francisco Bay relative to the increase, and water quality would not be lowered. Therefore, this Order complies with federal and state antidegradation policies.

Order R2-2021-0019 replaced the previous order's technology-based effluent limitation for total residual chlorine (0.0 mg/L) with a higher water quality-based effluent limitation (0.98 mg/L) and removed the previous order's technology-based effluent limit for oil and grease. Order R2 2021-0019 explains that these changes comply with federal and State antidegradation policies pursuant to Order R2-2021-0019.

This Order authorizes the discharge of up to 0.5 MGD of purified water to Alamo Canal as part of the Discharger's proposed purified water pilot project (see Fact Sheet section 2.6, Planned Changes). The discharge would be purified secondary-treated wastewater and is intended to replenish the Niles Cone Groundwater Basin underneath Alameda Creek. Because the water would be purified, it would not be expected to introduce pollutants to Alamo Canal. Although the water purification is expected to remove all chemical pollutants, including chlorine, this Order contains a total residual chlorine

effluent limitation to further ensure that these discharges meet water quality objectives. Therefore, the discharge of purified water complies with federal and state antidegradation policies.

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

This Order's WQBELs have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). U.S. EPA approved the remaining beneficial uses and water quality objectives, so they are also applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in sections 5.1 and 5.2 of the Order are based on Basin Plan narrative and numeric water quality objectives. The receiving water limitation in section 5.3 of the Order requires compliance with federal and state water quality standards in accordance with the CWA and regulations adopted thereunder.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

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

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. Attachment G contains standard provisions that supplement the provisions in Attachment D. This Order omits the federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the state's enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

6.2. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. For more information, see Fact Sheet section 7.

6.3. Special Provisions

6.3.1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

6.3.2. Effluent Characterization Study and Report

This Order does not include WQBELs for pollutants that do not demonstrate reasonable potential, but this provision requires the Discharger to evaluate monitoring data to verify that the reasonable potential analysis conclusions of this Order remain valid. This requirement is authorized pursuant to 40 C.F.R. section 122.41(h) and Water Code section 13383, and is necessary to inform the next permit reissuance and to ensure that the Discharger takes timely steps in response to any unanticipated change in effluent quality during the term of this Order.

6.3.3. Pollutant Minimization Program

This provision is based on Basin Plan section 4.13.2 and SIP section 2.4.5.

6.3.4. Special Provisions for Publicly-Owned Treatment Works

6.3.4.1. Pretreatment Program. This provision is based on 40 C.F.R. part 403. The Discharger implements a pretreatment program due to the nature and

volume of industrial influent to the individual treatment plants. This provision lists the Discharger's responsibilities regarding its pretreatment program and requires compliance with the provisions in Attachment H, Pretreatment Requirements.

- 6.3.4.2. **Sludge and Biosolids Management.** This provision is based on Basin Plan section 4.17. "Sludge" refers to the solid, semisolid, and liquid residue removed during primary, secondary, and advanced wastewater treatment processes. "Biosolids" refers to sludge that has been treated and may be beneficially reused.
- 6.3.4.3. **Collection System Management.** The Discharger's collection system is part of the Facility regulated through this Order. This provision requires compliance with Attachments D and G and states that these requirements may be satisfied by separately complying with State Water Board Order 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent order updating these requirements. These statewide WDRs require public agencies that own or operate sanitary sewer systems with one or more miles of sewer lines to enroll for coverage and comply with requirements to develop sanitary sewer management plans and report sanitary sewer overflows, among other provisions and prohibitions. The statewide WDRs contain requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive and, therefore, more stringent than the standard provisions in Attachments D and G. Compliance with the statewide WDRs will satisfy the corresponding requirements in Attachments D and G.
- 6.3.4.4. **Resource Recovery from Anaerobically Digestible Material.** Standard Operating Procedures are required for publicly-owned treatment works that accept hauled waste food, fats, oil, and grease for injection into anaerobic digesters. The development and implementation of Standard Operating Procedures for management of these materials is intended to allow the California Department of Resources Recycling and Recovery to exempt this activity from separate and redundant permitting programs. Some POTWs choose to accept organic material, such as waste food, fats, oils, and grease, into their anaerobic digesters to increase production of methane and other biogases for energy production and to prevent such materials from being discharged into the collection system and potentially causing sanitary sewer overflows. The California Department of Resources Recycling and Recovery has proposed to exempt publicly-owned treatment works from Process Facility/Transfer Station permit requirements when the same activity is regulated under WDRs or NPDES permits. The proposed exemption is restricted to anaerobically digestible materials that have been prescreened, slurried, processed, and conveyed in a closed system for codigestion with

regular sewage sludge. The exemption requires that the publicly-owned treatment works develop Standard Operating Procedures for proper handling, processing, tracking, and management of anaerobically digestible material.

6.3.5. Other Special Provisions

- 6.3.5.1. **Purified Water Pilot Project.** This provision is based on 40 C.F.R. section 122.41(l). It specifies conditions that must be met before the Discharger begins discharging purified water through Discharge Point 003. It is necessary so the Regional Water Board knows when the discharge will commence and to ensure that the Discharger complies with Discharge Prohibition 3.6.
- 6.3.5.2. **Copper Action Plan.** This provision is based on Basin Plan section 7.2.1.2 and is necessary to ensure that use of copper site-specific objectives is consistent with antidegradation policies. This Order requires the Discharger to implement source control and pollution prevention for identified sources. Additional actions may be necessary depending on the three-year rolling mean copper concentration in Central San Francisco Bay. Data the San Francisco Estuary Institute compiled for 2015-2019 indicate no degradation of San Francisco Bay water quality with respect to copper (<https://www.sfei.org/pages/copper-site-specific-objective-3-year-rolling-averages-0>).
- 6.3.5.3. **Cyanide Action Plan.** This provision is based on Basin Plan section 4.7.2.2 and is necessary to ensure that use of cyanide site-specific objectives is consistent with antidegradation policies. The threshold for considering influent cyanide concentrations to indicate a possible “significant cyanide discharge” in the Discharger’s service area is set at 17 µg/L. This trigger is retained from the previous order, which was calculated using the 99th percentile cyanide concentration of all individual treatment plant influent samples between March 2012 and August 2016.
- 6.3.5.4. **Flow Capacity Increase.** This provision is necessary for the Regional Water Board to know when the Discharger’s average daily dry weather influent flow capacity will increase and to ensure that plant upgrades can effectively and reliably handle the increased flows.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The following provides the rationale for the monitoring and reporting requirements in the MRP.

7.1 Monitoring Requirements Rationale

- 7.1.1. **Influent Monitoring.** Influent monitoring at Monitoring Location INF-002F is necessary to understand Facility operations and to evaluate compliance with Prohibition 3.4, which prohibits average dry weather influent flow greater than 17.0 MGD. Influent CBOD and TSS monitoring is necessary to evaluate compliance with this Order's 85 percent removal requirement. Finally, Basin Plan section 4.7.2.2 requires influent cyanide monitoring because this Order is based on site-specific cyanide water quality objectives.
- 7.1.2. **Effluent Monitoring.** Effluent monitoring at Monitoring Location EFF-001 is necessary to understand Facility operations, to evaluate compliance with this Order's effluent limitations, and to conduct future reasonable potential analyses. Effluent monitoring at Monitoring Location EFF-001D (after disinfection and before dechlorination) is necessary to evaluate compliance with this Order's bacteria effluent limitations. Monitoring Location EFF-001D can be collocated with Monitoring Location EFF-001 if enterococcus and fecal coliform bacteria regrowth does not significantly interfere with the monitoring results. Effluent monitoring at Monitoring Locations EFF-002F1 and EFF-002F2 is also necessary to understand Facility operations and to evaluate compliance with this Order's effluent limitations. Finally, effluent monitoring at Monitoring Location EFF-002F3 is necessary to evaluate compliance with Discharge Prohibition 3.6, to evaluate compliance with this Order's chlorine effluent limitations, and confirm that there is no reasonable potential for the purified water discharge to cause or contribute to exceedances of water quality objectives.
- 7.1.3. **Toxicity Monitoring.** Acute and chronic toxicity tests are necessary to evaluate compliance with the acute toxicity effluent limitations and to conduct future reasonable potential analyses. Additionally, chronic toxicity tests are necessary to evaluate whether chronic toxicity exceeds triggers for accelerated monitoring and Toxicity Reduction Evaluations based on Basin Plan sections 4.5.5.3.2 and 4.5.5.3.3 and Basin Plan Table 4-5. Chronic toxicity tests are also necessary to evaluate compliance with the chronic toxicity effluent limitations and to conduct future reasonable potential analyses.

This Order allows the Discharger to conduct acute toxicity tests by measuring survival of test organisms during chronic toxicity tests using 100 percent effluent (versus standard toxicity tests). These tests will be at least as sensitive as those conducted under standard bioassays because the test organisms will be younger.

Conducting the toxicity tests using fathead minnow (*Pimephales promelas*), a freshwater organism, is necessary because the Discharger's March 2011 final chronic toxicity screening report identified it to be the most sensitive species to the current discharge. Upon EBDA's acceptance of brine in accordance with

Order R2-2022-0023 (for the EBDA Common Outfall), conducting the chronic toxicity tests using the blue mussel (*Mytilus galloprovincialis*), a marine organism, is necessary because the discharge will contain increased brine concentrations that are likely to be toxic to freshwater organisms. The Discharger conducted quarterly chronic toxicity screening studies between February and November 2020 using various effluent-to-brine blends (ranging from 100 percent effluent to a 25:1 effluent-to-brine ratio) and identified blue mussel as the most sensitive species.

- 7.1.4. **Receiving Water Monitoring.** The Discharger is required to continue participating in the Regional Monitoring Program, which involves collecting data on pollutants and toxicity in San Francisco Bay water, sediment, and biota. This monitoring is necessary to characterize the receiving water and the effects of the discharge this Order authorizes.
- 7.1.5. **Pretreatment and Biosolids Monitoring.** The pretreatment and biosolids monitoring requirements for influent, effluent, and biosolids are necessary to evaluate compliance with pretreatment requirements.
- 7.1.6. **Recycled Water Monitoring.** The recycled water monitoring and reporting requirements incorporate the existing requirements of State Water Board Order WQ 2019-0037-EXEC (Amending Monitoring and Reporting Programs for Waste Discharge Requirements, National Pollutant Discharge Elimination System Permits, Water Reclamation Requirements, Master Recycling Permits, and General Waste Discharge Requirements), issued on July 24, 2019, pursuant to Water Code sections 13267 and 13383.
- 7.1.7. **Other Monitoring Requirements.** Pursuant to CWA section 308, U.S. EPA requires some dischargers to participate in a Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program that evaluates the analytical abilities of laboratories that perform or support NPDES permit-required monitoring. The program applies to discharger laboratories and contract laboratories and evaluates each laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES program. There are two options to comply: (1) the Discharger may obtain and analyze DMR-QA samples, or (2) pursuant to a waiver U.S. EPA issued to the State Water Board, the Discharger may submit results from the most recent Water Pollution Performance Evaluation Study. MRP section 1.4 requires the Discharger to ensure that the results of the DMR-QA Study or most recent Water Pollution Performance Evaluation Study are submitted to the State Water Board, which forwards the results to U.S. EPA.
- 7.2. **Monitoring Requirements Summary.** The table below summarizes routine monitoring requirements. This table is for informational purposes only. The actual requirements are specified in the MRP and elsewhere in this Order. In addition to

undertaking the monitoring below, the Discharger must conduct receiving water monitoring by continuing to participate in the RMP.

Table F-13. Monitoring Requirements Summary

Parameter ^[1]	Influent INF-002F ^[2]	Effluent EFF-002F1 ^[2]	Effluent EFF-002F2 ^[2]	Effluent EFF-002F3 ^[2]	Effluent EFF-001 or EFF-001D ^[2]	Biosolids BIO-002F ^[2]
Flow	Continuous/D	Continuous/D	Continuous/D	Continuous/D	Continuous/D	Continuous/D
pH	-	2/Week	2/Week	-	-	-
CBOD	1/Week	1/Week	-	-	-	-
TSS	1/Week	3/Week	-	-	-	-
Chlorine, Total Residual	-	-	-	-	Continuous/D	-
Ammonia, Total	-	-	-	-	2/Month	-
Copper, Total Recoverable	-	-	-	-	1/Month	-
Cyanide, Total	1/Quarter	-	1/Month	-	1/Month	1/Year
Dioxin-TEQ	-	-	-	-	Once	-
Enterococcus Bacteria	-	-	-	-	2/Week	-
Fecal Coliform Bacteria	-	-	-	-	2/Week	-
Acute Toxicity	-	-	-	-	1/Quarter	-
Chronic Toxicity	-	-	-	-	1/Quarter	-
VOC	1/Year	-	Once	-	Once	1/Year
BNA	1/Year	-	Once	-	Once	1/Year
Metals and Other Elements ^[3]	1/Year	-	1/Month	-	-	1/Year
Hexavalent Chromium	1/Year	-	1/Month	-	1/Month	1/Year
Mercury	1/Quarter	-	1/Quarter	-	-	1/Year
Priority Pollutants	-	-	-	-	Once	-

Footnotes:

^[1] The Discharger must also comply with the monitoring requirements in the Mercury and PCBs Watershed Permit (NPDES Permit CA0038849) and the Nutrients Watershed Permit (NPDES Permit CA0038873).

^[2] The MRP defines these sampling frequencies.

^[3] The metals and other elements are arsenic, cadmium, copper, lead, nickel, selenium, silver, and zinc.

8. PUBLIC PARTICIPATION

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

8.1. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs

for the discharge and provided an opportunity to submit written comments and recommendations. The public had access to the agenda and any changes in dates and locations through the [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) (waterboards.ca.gov/sanfranciscobay).

- 8.2. Written Comments.** Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were to be submitted either in person, by e-mail, or by mail to the Executive Office at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of James Parrish.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. on June 20, 2022.

- 8.3. Public Hearing.** The Regional Water Board held a public hearing on the tentative WDRs during its meeting at the following date and time:

Date: July 13, 2022
Time: 9:00 a.m.

Contact: James Parrish, (510) 622-2381, James.Parrish@waterboards.ca.gov

Interested persons were provided notice of the hearing and information on how to participate. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested to be in writing.

If the date or venue of any public hearing changes, the changes will be reflected in the most current agenda posted on the [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) (waterboards.ca.gov/sanfranciscobay).

- 8.4. Reconsideration of Waste Discharge Requirements.** Any person aggrieved by this Regional Water Board action may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050. The State Water Board must receive the petition at the following address within 30 calendar days of the date of Regional Water Board action:

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

A petition may also be filed by email at waterqualitypetitions@waterboards.ca.gov.

For instructions on how to file a water quality petition for review, see the [Water Board's petition instructions](https://waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) (waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml).

- 8.5. Information and Copying.** Supporting documents and comments received are on file. To review these documents, contact Melinda Wong the Regional Water Board's custodian of records by calling (510) 622-2300 or emailing Melinda.Wong@waterboards.ca.gov. Document copying may be arranged.
- 8.6. Register of Interested Persons.** Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the Facility, and provide a name, address, and phone number.
- 8.7. Additional Information.** Requests for additional information or questions regarding this Order should be directed to James Parrish, (510) 622-2381, James.Parrish@waterboards.ca.gov.

ATTACHMENT G – REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

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ATTACHMENT G – REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

APPLICABILITY

This document supplements the requirements of Federal Standard Provisions (Attachment D). For clarity, these provisions are arranged using the same headings as those used in Attachment D.

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply – Not Supplemented

1.2. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

1.3. Duty to Mitigate – Supplement to Attachment D, Provision 1.3.

1.3.1. **Contingency Plan.** The Discharger shall maintain a Contingency Plan as prudent in accordance with current facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan (see Provision 1.3.2, below) into one document. In accordance with Regional Water Board Resolution No. 74-10, discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below may be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code section 13387. The Contingency Plan shall, at a minimum, provide for the following:

- 1.3.1.1. Sufficient personnel for continued facility operation and maintenance during employee strikes or strikes against contractors providing services;
- 1.3.1.2. Maintenance of adequate chemicals or other supplies, and spare parts necessary for continued facility operations;
- 1.3.1.3. Emergency standby power;
- 1.3.1.4. Protection against vandalism;
- 1.3.1.5. Expedition action to repair failures of, or damage to, equipment, including any sewer lines;

- 1.3.1.6. Reporting of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges; and
- 1.3.1.7. Maintenance, replacement, and surveillance of physical condition of equipment and facilities, including any sewer lines.
- 1.3.2. **Spill Prevention Plan.** The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and to minimize the effects of any such discharges. The Spill Prevention Plan shall do the following:
 - 1.3.2.1. Identify the possible sources of accidental discharge, untreated or partially-treated waste bypass, and polluted drainage;
 - 1.3.2.2. State when current facilities and procedures became operational and evaluate their effectiveness; and
 - 1.3.2.3. Predict the effectiveness of any proposed facilities and procedures and provide an implementation schedule with interim and final dates when the proposed facilities and procedures will be constructed, implemented, or operational.

1.4. Proper Operation and Maintenance – Supplement to Attachment D,
Provision 1.4

- 1.4.1. **Operation and Maintenance Manual.** The Discharger shall maintain an Operation and Maintenance Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the Operation and Maintenance Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The Operation and Maintenance Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.
- 1.4.2. **Wastewater Facilities Status Report.** The Discharger shall maintain a Wastewater Facilities Status Report and regularly review, revise, or update it, as necessary. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.
- 1.4.3. **Proper Supervision and Operation of Publicly-Owned Treatment Works (POTWs).** POTWs shall be supervised and operated by persons possessing

certificates of appropriate grade pursuant to Title 23, section 3680, of the California Code of Regulations.

1.5. Property Rights – Not Supplemented

1.6. Inspection and Entry – Not Supplemented

1.7. Bypass – Not Supplemented

1.8. Upset – Not Supplemented

1.9. Other – Addition to Attachment D

- 1.9.1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code section 13050.
- 1.9.2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.
- 1.9.3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

2. STANDARD PROVISIONS – PERMIT ACTION – NOT SUPPLEMENTED

3. STANDARD PROVISIONS – MONITORING

3.1. Sampling and Analyses – Supplement to Attachment D, Provisions 3.1 and 3.2

- 3.1.1. **Certified Laboratories.** Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code section 13176.
- 3.1.2. **Minimum Levels.** For the 126 priority pollutants, the Discharger should use the analytical methods listed in Table B unless the Monitoring and Reporting Program (MRP, Attachment E) requires a particular method or minimum level (ML). All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.
- 3.1.3. **Monitoring Frequency.** The MRP specifies the minimum sampling and analysis schedule.
 - 3.1.3.1. **Sample Collection Timing**
 - 3.1.3.1.1. The Discharger shall collect influent samples on varying days selected at random and shall not include any plant recirculation or other sidestream

wastes, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative influent sampling plan if it is representative of plant influent and complies with all other permit requirements.

- 3.1.3.1.2. The Discharger shall collect effluent samples on days coincident with influent sampling, unless otherwise stipulated by the MRP. If influent sampling is not required, the Discharger shall collect effluent samples on varying days selected at random, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative effluent sampling plan if it is representative of plant discharge and in compliance with all other permit requirements.
- 3.1.3.1.3. The Discharger shall collect effluent grab samples during periods of daytime maximum peak flows (or peak flows through secondary treatment units for facilities that recycle effluent).
- 3.1.3.1.4. Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay the MRP requires. During the course of the bioassay, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event that a bioassay result does not comply with effluent limitations, the Discharger shall analyze the retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limitations.
- 3.1.3.1.4.1. The Discharger shall perform bioassays on final effluent samples; when chlorine is used for disinfection, bioassays shall be performed on effluent after chlorination and dechlorination; and
- 3.1.3.1.4.2. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un ionized ammonia whenever test results fail to meet effluent limitations.

3.1.3.2. **Conditions Triggering Accelerated Monitoring**

- 3.1.3.2.1. **Average Monthly Effluent Limitation Exceedance.** If the results from two consecutive samples of a constituent monitored in a particular month exceed the average monthly effluent limitation for any parameter (or if the required sampling frequency is once per month or less and the monthly sample exceeds the average monthly effluent limitation), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter complies with the average monthly effluent limitation.
- 3.1.3.2.2. **Maximum Daily Effluent Limitation Exceedance.** If a sample result exceeds a maximum daily effluent limitation, the Discharger shall, within 24 hours after the result is received, increase its sampling frequency to

daily until the results from two samples collected on consecutive days show compliance with the maximum daily effluent limitation.

- 3.1.3.2.3. **Acute Toxicity.** If final or intermediate results of an acute bioassay indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay is less than 70 percent), the Discharger shall initiate a new test as soon as practical or as described in applicable State Water Board plan provisions that become effective after adoption of these Regional Standard Provisions. The Discharger shall investigate the cause of the mortalities and report its findings in the next self-monitoring report.
- 3.1.3.2.4. **Chlorine.** The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limitation is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring.
- 3.1.3.2.5. **Bypass.** Except as indicated below, if a Discharger bypasses any portion of its treatment facility, it shall monitor flows and collect samples at affected discharge points and analyze samples for all constituents with effluent limitations on a daily basis for the duration of the bypass. The Discharger need not accelerate chronic toxicity monitoring. The Discharger also need not collect and analyze samples for mercury, dioxin-TEQ, and PCBs after the first day of the bypass. The Discharger may satisfy the accelerated acute toxicity monitoring requirement by conducting a flow-through test or static renewal test that captures the duration of the bypass (regardless of the method specified in the MRP). If bypassing disinfection units only, the Discharger shall only monitor bacteria indicators daily.
- 3.1.3.2.5.1. **Bypass for Essential Maintenance.** If a Discharger bypasses a treatment unit for essential maintenance pursuant to Attachment D section 1.7.2, the Executive Officer may reduce the accelerated monitoring requirements above if the Discharger (i) monitors effluent at affected discharge points on the first day of the bypass for all constituents with effluent limitations, except chronic toxicity; and (ii) identifies and implements measures to ensure that the bypass will continue to comply with effluent limitations.
- 3.1.3.2.5.2. **Approved Wet Weather Bypasses.** If a Discharger bypasses a treatment unit or permitted outfall during wet weather with Executive Officer approval pursuant to Attachment D section 1.7.4, the Discharger shall monitor flows and collect and retain samples for affected

discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze daily for TSS using 24 hour composites (or more frequent increments) and for bacteria indicators with effluent limitations using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze daily the retained samples for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

3.2. Standard Observations – Addition to Attachment D

3.2.1. **Receiving Water Observations.** The following requirements only apply when the MRP requires standard observations of receiving waters. Standard observations shall include the following:

- 3.2.1.1. **Floating and Suspended Materials (e.g., oil, grease, algae, and other macroscopic particulate matter)** — presence or absence, source, and size of affected area.
- 3.2.1.2. **Discoloration and Turbidity** — color, source, and size of affected area.
- 3.2.1.3. **Odor** — presence or absence, characterization, source, and distance of travel.
- 3.2.1.4. **Beneficial Water Use** — estimated number of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities.
- 3.2.1.5. **Hydrographic Condition** — time and height of high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time).
- 3.2.1.6. **Weather Conditions** — wind direction, air temperature, and total precipitation during five days prior to observation.

3.2.2. **Wastewater Effluent Observations.** The following requirements only apply when the MRP requires standard observations of wastewater effluent. Standard observations shall include the following:

- 3.2.2.1. **Floating and Suspended Material of Wastewater Origin** (e.g., oil, grease, algae, and other macroscopic particulate matter) — presence or absence.
- 3.2.2.2. **Odor** — presence or absence, characterization, source, distance of travel, and wind direction.

3.2.3. **Beach and Shoreline Observations.** The following requirements only apply when the MRP requires standard observations of beaches or shorelines. Standard observations shall include the following:

3.2.3.1. **Material of Wastewater Origin** — presence or absence, description of material, estimated size of affected area, and source.

3.2.3.2. **Beneficial Use** — estimate of number of people participating in recreational water contact, non-water contact, and fishing activities.

3.2.4. **Waste Treatment and/or Disposal Facility Periphery Observations.** The following requirements only apply when the MRP requires standard observations of the periphery of waste treatment or disposal facilities. Standard observations shall include the following:

3.2.4.1. **Odor** — presence or absence, characterization, source, and distance of travel.

3.2.4.2. **Weather Conditions** — wind direction and estimated velocity.

4. STANDARD PROVISIONS – RECORDS

4.1. Records to be Maintained – Supplement to Attachment D, Provision 4.1

The Discharger shall maintain records in a manner and at a location (e.g., the wastewater treatment plant or the Discharger's offices) such that the records are accessible to Regional Water Board staff. The minimum retention period specified in Attachment D, Provision IV, shall be extended during the course of any unresolved litigation regarding permit-related discharges, or when requested by Regional Water Board or U.S. EPA, Region IX, staff.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

4.2. Records of Monitoring – Supplement to Attachment D, Provision 4.2

Monitoring records shall include the following:

4.2.1. **Analytical Information.** Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

4.2.2. **Disinfection Process.** For the disinfection process, records shall include the following:

4.2.2.1. For bacteriological analyses:

4.2.2.1.1. Wastewater flow rate at the time of sample collection; and

- 4.2.2.1.2. Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in the MRP).
- 4.2.2.2. For the chlorination process (when chlorine is used for disinfection), at least daily average values for the following:
 - 4.2.2.2.1. Chlorine residual of treated wastewater as it enters the chlorine contact basin (mg/L);
 - 4.2.2.2.2. Chlorine dosage (kg/day); and
 - 4.2.2.2.3. Dechlorination chemical dosage (kg/day).
- 4.2.3. **Wastewater Treatment Process Solids.** For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:
 - 4.2.3.1. Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and
 - 4.2.3.2. Final disposition of such solids (e.g., landfill, other subsequent treatment unit).
- 4.2.4. **Treatment Process Bypasses.** For all treatment process bypasses, including wet weather blending, records shall include the following:
 - 4.2.4.1. Chronological log of treatment process bypasses;
 - 4.2.4.2. Identification of treatment processes bypassed;
 - 4.2.4.3. Beginning and ending dates and times of bypasses;
 - 4.2.4.4. Bypass durations;
 - 4.2.4.5. Estimated bypass volumes; and
 - 4.2.4.6. Description of, or reference to other reports describing, the bypasses, their cause, the corrective actions taken (except for wet weather blending explicitly approved within the permit and in compliance with any related permit conditions), and any additional monitoring conducted.
- 4.2.5. **Treatment Plant Overflows.** The Discharger shall retain a chronological log of overflows at the treatment plant, including the headworks and all units and appurtenances downstream, and records supporting the information provided in accordance with Provision 5.5.2, below.

4.3. Claims of Confidentiality – Not Supplemented

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information – Not Supplemented

5.2. Signatory and Certification Requirements – Not Supplemented

5.3. Monitoring Reports – Supplement to Attachment D, Provision 5.3

5.3.1. Self-Monitoring Reports. For each reporting period established in the MRP, the Discharger shall submit a self-monitoring report to the Regional Water Board in accordance with the requirements listed in the MRP and below:

5.3.1.1. Transmittal Letter. Each self-monitoring report shall be submitted with a transmittal letter that includes the following:

- 5.3.1.1.1. Identification of all violations of effluent limitations or other waste discharge requirements found during the reporting period;
- 5.3.1.1.2. Details regarding the violations, such as parameters, magnitude, test results, frequency, and dates;
- 5.3.1.1.3. Causes of the violations;
- 5.3.1.1.4. Corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedules for implementation (the Discharger may refer to previously submitted reports that address the corrective actions);
- 5.3.1.1.5. Explanation for any data invalidation. Data should not be submitted in a self-monitoring report if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate a measurement after submitting it in a self-monitoring report, the Discharger shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. The formal request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation (e.g., laboratory sheet, log entry, test results), and a discussion of the corrective actions taken or planned (with a time schedule for completion) to prevent recurrence of the sampling or measurement problem;
- 5.3.1.1.6. Description of blending, if any. If the Discharger blends, it shall describe the duration of blending events and certify whether the blending complied with all conditions for blending;

- 5.3.1.1.7. Description of other bypasses, if any. If the Discharger bypasses any treatment units (other than blending), it shall describe the duration of the bypasses and effluent quality during those times; and
- 5.3.1.1.8. Signature. The transmittal letter shall be signed in accordance with Attachment D, Provision 5.2.
- 5.3.1.2. **Compliance Evaluation Summary.** Each self-monitoring report shall include a compliance evaluation summary that addresses each parameter for which the permit specifies effluent limitations, the number of samples taken during the monitoring period, and the number of samples that exceed the effluent limitations.
- 5.3.1.3. **More Frequent Monitoring.** If the Discharger monitors any pollutant more frequently than required by the MRP, the Discharger shall include the results of such monitoring in the calculation and reporting of the data submitted in the self-monitoring report.
- 5.3.1.4. **Analysis Results**
- 5.3.1.4.1. **Tabulation.** Each self-monitoring report shall include tabulations of all required analyses and observations, including parameters, dates, times, sample stations, types of samples, test results, method detection limits, method minimum levels, and method reporting levels (if applicable), signed by the laboratory director or other responsible official.
- 5.3.1.4.2. **Multiple Samples.** Unless the MRP specifies otherwise, when determining compliance with effluent limitations (other than instantaneous effluent limitations) and more than one sample result is available, the Discharger shall compute the arithmetic mean. If the data set contains one or more results that are "Detected, but Not Quantified (DNQ) or "Not Detected" (ND), the Discharger shall instead compute the median in accordance with the following procedure:
- 5.3.1.4.2.1. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- 5.3.1.4.2.2. The median of the data set shall be determined. If the data set has an odd number of data points, the median is the middle value. If the data set has an even number of data points, the median is the average of the two values around the middle, unless one or both of these values is ND or DNQ, in which case the median shall be the lower of the two results (where DNQ is lower than a quantified value and ND is lower than DNQ).

- 5.3.1.4.3. **Duplicate Samples.** The Discharger shall report the average of duplicate sample analyses when reporting for a single sample result (or the median if one or more of the duplicates is DNQ or ND [see Provision 5.3.1.4.2, above]). For bacteria indicators, the Discharger shall report the geometric mean of the duplicate analyses.
- 5.3.1.4.4. **Dioxin-TEQ.** The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the reporting level, the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (MLs) to zero. The Discharger shall calculate and report dioxin-TEQ using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \sum (C_x \times \text{TEF}_x \times \text{BEF}_x)$$

where: C_x = measured or estimated concentration of congener x

TEF_x = toxicity equivalency factor for congener x

BEF_x = bioaccumulation equivalency factor for congener x

Table A
Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	2005 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0003	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.03	0.2
2,3,4,7,8-PeCDF	50	0.3	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0003	0.02

- 5.3.1.5. **Results Not Yet Available.** The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses may require additional time to complete analytical processes and report results. In these cases, the Discharger shall describe the circumstances in the self-monitoring report and include the data for these parameters and relevant discussions of any violations in the next self-monitoring report due after the results are available.
- 5.3.1.6. **Annual Self-Monitoring Reports.** By the date specified in the MRP, the Discharger shall submit an annual self-monitoring report covering the previous calendar year. The report shall contain the following:
- 5.3.1.6.1. Comprehensive discussion of treatment plant performance, including documentation of any blending or other bypass events, and compliance with the permit. This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve the performance and reliability of wastewater collection, treatment, or disposal practices;
 - 5.3.1.6.2. List of approved analyses, including the following:
 - 5.3.1.6.2.1. List of analyses for which the Discharger is certified;
 - 5.3.1.6.2.2. List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory need not be submitted but shall be retained onsite); and
 - 5.3.1.6.2.3. List of “waived” analyses, as approved;
 - 5.3.1.6.3. Plan view drawing or map showing the Discharger’s facility, flow routing, and sampling and observation station locations; and
 - 5.3.1.6.4. Results of facility report reviews. The Discharger shall regularly review, revise, and update, as necessary, the Operation and Maintenance Manual, Contingency Plan, Spill Prevention Plan, and Wastewater Facilities Status Report so these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall describe or summarize its review and evaluation procedures, recommended or planned actions, and estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure that they remain up-to-date.

5.4. Compliance Schedules – Not supplemented

5.5. Twenty-Four Hour Reporting – Supplement to Attachment D, Provision 5.5

5.5.1. Oil or Other Hazardous Material Spills

- 5.5.1.1. Within 24 hours of becoming aware of a spill of oil or other hazardous material not contained onsite and completely cleaned up, the Discharger shall report as follows:
 - 5.5.1.1.1. If the spill exceeds reportable quantities for hazardous materials listed in 40 C.F.R. part 302. The Discharger shall call the California Office of Emergency Services (800 852-7550).
 - 5.5.1.1.2. If the spill does not exceed reportable quantities for hazardous materials listed in 40 C.F.R., part 302, the Discharger shall call the Regional Water Board (510-622-2369).
- 5.5.1.2. The Discharger shall submit a written report to the Regional Water Board within five working days following either of the above telephone notifications unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:
 - 5.5.1.2.1. Date and time of spill, and duration if known;
 - 5.5.1.2.2. Location of spill (street address or description of location);
 - 5.5.1.2.3. Nature of material spilled;
 - 5.5.1.2.4. Quantity of material spilled;
 - 5.5.1.2.5. Receiving water body affected, if any;
 - 5.5.1.2.6. Cause of spill;
 - 5.5.1.2.7. Estimated size of affected area;
 - 5.5.1.2.8. Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);
 - 5.5.1.2.9. Corrective actions taken to contain, minimize, or clean up the spill;
 - 5.5.1.2.10. Future corrective actions planned to prevent recurrence, and implementation schedule; and
 - 5.5.1.2.11. Persons or agencies notified.

5.5.2. **Unauthorized Municipal Wastewater Treatment Plant Discharges**¹

5.5.2.1. **Two-Hour Notification.** For any unauthorized discharge that enters a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two hours after becoming aware of the discharge, notify the California Office of Emergency Services (800-852-7550) and the local health officer or director of environmental health with jurisdiction over the affected water body. Notification shall include the following:

- 5.5.2.1.1. Incident description and cause;
- 5.5.2.1.2. Location of threatened or involved waterways or storm drains;
- 5.5.2.1.3. Date and time that the unauthorized discharge started;
- 5.5.2.1.4. Estimated quantity and duration of the unauthorized discharge (to the extent known), and estimated amount recovered;
- 5.5.2.1.5. Level of treatment prior to discharge (e.g., raw wastewater, primary-treated wastewater, or undisinfected secondary-treated wastewater); and
- 5.5.2.1.6. Identity of person reporting the unauthorized discharge.

5.5.2.2. **Five-Day Written Report.** Within five business days following the two-hour notification, the Discharger shall submit a written report that includes, in addition to the information listed in Provision 5.5.2.1, above, the following:

- 5.5.2.2.1. Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;
- 5.5.2.2.2. Efforts implemented to minimize public exposure to the unauthorized discharge;
- 5.5.2.2.3. Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of receiving water) and extent of sampling if conducted;

¹ California Code of Regulations, Title 23, section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially-treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment, or disposal system.

- 5.5.2.2.4. Corrective measures taken to minimize the impact of the unauthorized discharge;
- 5.5.2.2.5. Measures to be taken to minimize the potential for a similar unauthorized discharge in the future;
- 5.5.2.2.6. Summary of Spill Prevention Plan or Operation and Maintenance Manual modifications to be made, if necessary, to minimize the potential for future unauthorized discharges; and
- 5.5.2.2.7. Quantity and duration of the unauthorized discharge, and the amount recovered.

5.6. Planned Changes – Not supplemented

5.7. Anticipated Noncompliance – Not supplemented

5.8. Other Noncompliance – Not supplemented

5.9. Other Information – Not supplemented

6. STANDARD PROVISIONS – ENFORCEMENT – NOT SUPPLEMENTED

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – NOT SUPPLEMENTED

8. DEFINITIONS – ADDITION TO ATTACHMENT D

More definitions can be found in Attachment A of this NPDES Permit.

8.1. Arithmetic Calculations

- 8.1.1. **Geometric Mean.** The antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

$$\text{Geometric Mean} = \text{Anti log } (1/N \sum \text{Log } C_i)$$

or

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_N)^{1/N}$$

Where “N” is the number of data points for the period analyzed and “C” is the concentration for each of the “N” data points.

- 8.1.2. **Mass Emission Rate.** The rate of discharge expressed in mass. The mass emission rate is obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.345}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.785}{N} \sum_{i=1}^N Q_i C_i$$

In which “N” is the number of samples analyzed in any calendar day and “Q_i” and “C_i” are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the “N” grab samples that may be taken in any calendar day. If a composite sample is taken, “C_i” is the concentration measured in the composite sample and “Q_i” is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow weighted average of the same constituent in the combined waste streams as follows:

$$C_d = \text{Average daily concentration} = \frac{1}{Q_t} \sum_{i=1}^N Q_i C_i$$

In which “N” is the number of component waste streams and “Q” and “C” are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the “N” waste streams. “Q_t” is the total flow rate of the combined waste streams.

- 8.1.3. **Removal Efficiency.** The ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

$$\text{Removal Efficiency (\%)} = 100 \times [1 - (\text{Effluent Concentration} / \text{Influent Concentration})]$$

- 8.2. **Blending** – the practice of bypassing biological treatment units and recombining the bypass wastewater with biologically-treated wastewater.
- 8.3. **Composite Sample** – a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-

weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative protocol.

- 8.4. Duplicate Sample** – a second sample taken from the same source and at the same time as an initial sample (such samples are typically analyzed identically to measure analytical variability).
- 8.5. Grab Sample** – an individual sample collected during a short period not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the sample is collected.
- 8.6. Overflow** – the intentional or unintentional spilling or forcing out of untreated or partially-treated waste from a transport system (e.g., through manholes, at pump stations, or at collection points) upstream of the treatment plant headworks or from any part of a treatment plant.
- 8.7. Priority Pollutants** – those constituents referred to in 40 C.F.R. part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule.
- 8.8. Untreated waste** – raw wastewater.

Table B
List of Monitoring Parameters, Analytical Methods, and Minimum Levels (µg/L)^[1]

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
1	Antimony	204.2	-	-	-	-	10	5	50	0.5	5	0.5	-	1000
2	Arsenic	206.3	-	-	-	20	-	2	10	2	2	1	-	1000
3	Beryllium	-	-	-	-	-	20	0.5	2	0.5	1	-	-	1000
4	Cadmium	200 or 213	-	-	-	-	10	0.5	10	0.25	0.5	-	-	1000
5a	Chromium (III)	SM 3500	-	-	-	-	-	-	-	-	-	-	-	-
5b	Chromium (VI)	SM 3500	-	-	-	10	5	-	-	-	-	-	-	1000
	Chromium (total) ^[3]	SM 3500	-	-	-	-	50	2	10	0.5	1	-	-	1000
6	Copper	200.9	-	-	-	-	25	5	10	0.5	2	-	-	1000
7	Lead	200.9	-	-	-	-	20	5	5	0.5	2	-	-	10,000
8	Mercury	1631 ^[4]	-	-	-	-	-	-	-	-	-	-	-	-
9	Nickel	249.2	-	-	-	-	50	5	20	1	5	-	-	1000
10	Selenium	200.8 or SM 3114B or C	-	-	-	-	-	5	10	2	5	1	-	1000
11	Silver	272.2	-	-	-	-	10	1	10	0.25	2	-	-	1000
12	Thallium	279.2	-	-	-	-	10	2	10	1	5	-	-	1000
13	Zinc	200 or 289	-	-	-	-	20	-	20	1	10	-	-	-
14	Cyanide	SM 4500 CN ⁻ C or I	-	-	-	5	-	-	-	-	-	-	-	-
15	Asbestos (only required for dischargers to MUN waters) ^[5]	0100.2 ^[6]	-	-	-	-	-	-	-	-	-	-	-	-
16	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613	-	-	-	-	-	-	-	-	-	-	-	-
17	Acrolein	603	2.0	5	-	-	-	-	-	-	-	-	-	-
18	Acrylonitrile	603	2.0	2	-	-	-	-	-	-	-	-	-	-
19	Benzene	602	0.5	2	-	-	-	-	-	-	-	-	-	-
33	Ethylbenzene	602	0.5	2	-	-	-	-	-	-	-	-	-	-
39	Toluene	602	0.5	2	-	-	-	-	-	-	-	-	-	-

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
20	Bromoform	601	0.5	2	-	-	-	-	-	-	-	-	-	-
21	Carbon Tetrachloride	601	0.5	2	-	-	-	-	-	-	-	-	-	-
22	Chlorobenzene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
23	Chlorodibromomethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
24	Chloroethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
25	2-Chloroethylvinyl Ether	601	1	1	-	-	-	-	-	-	-	-	-	-
26	Chloroform	601	0.5	2	-	-	-	-	-	-	-	-	-	-
75	1,2-Dichlorobenzene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
76	1,3-Dichlorobenzene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
77	1,4-Dichlorobenzene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
27	Dichlorobromomethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
28	1,1-Dichloroethane	601	0.5	1	-	-	-	-	-	-	-	-	-	-
29	1,2-Dichloroethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
30	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
31	1,2-Dichloropropane	601	0.5	1	-	-	-	-	-	-	-	-	-	-
32	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
34	Methyl Bromide or Bromomethane	601	1.0	2	-	-	-	-	-	-	-	-	-	-
35	Methyl Chloride or Chloromethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
36	Methylene Chloride or Dichloromethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
37	1,1,2,2-Tetrachloroethane	601	0.5	1	-	-	-	-	-	-	-	-	-	-
38	Tetrachloroethylene	601	0.5	2	-	-	-	-	-	-	-	-	-	-
40	1,2-Trans-Dichloroethylene	601	0.5	1	-	-	-	-	-	-	-	-	-	-
41	1,1,1-Trichloroethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
42	1,1,2-Trichloroethane	601	0.5	2	-	-	-	-	-	-	-	-	-	-
43	Trichloroethene	601	0.5	2	-	-	-	-	-	-	-	-	-	-

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
44	Vinyl Chloride	601	0.5	2	-	-	-	-	-	-	-	-	-	-
45	2-Chlorophenol	604	2	5	-	-	-	-	-	-	-	-	-	-
46	2,4-Dichlorophenol	604	1	5	-	-	-	-	-	-	-	-	-	-
47	2,4-Dimethylphenol	604	1	2	-	-	-	-	-	-	-	-	-	-
48	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5	-	-	-	-	-	-	-	-	-	-
49	2,4-Dinitrophenol	604	5	5	-	-	-	-	-	-	-	-	-	-
50	2-Nitrophenol	604	-	10	-	-	-	-	-	-	-	-	-	-
51	4-Nitrophenol	604	5	10	-	-	-	-	-	-	-	-	-	-
52	3-Methyl-4-Chlorophenol	604	5	1	-	-	-	-	-	-	-	-	-	-
53	Pentachlorophenol	604	1	5	-	-	-	-	-	-	-	-	-	-
54	Phenol	604	1	1	-	50	-	-	-	-	-	-	-	-
55	2,4,6-Trichlorophenol	604	10	10	-	-	-	-	-	-	-	-	-	-
56	Acenaphthene	610 HPLC	1	1	0.5	-	-	-	-	-	-	-	-	-
57	Acenaphthylene	610 HPLC	-	10	0.2	-	-	-	-	-	-	-	-	-
58	Anthracene	610 HPLC	-	10	2	-	-	-	-	-	-	-	-	-
60	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5	-	-	-	-	-	-	-	-	-	-
61	Benzo(a)Pyrene	610 HPLC	-	10	2	-	-	-	-	-	-	-	-	-
62	Benzo(b) Fluoranthene or 3,4 Benzo(b)fluoranthene	610 HPLC	-	10	10	-	-	-	-	-	-	-	-	-
63	Benzo(ghi)Perylene	610 HPLC	-	5	0.1	-	-	-	-	-	-	-	-	-
64	Benzo(k)Fluoranthene	610 HPLC	-	10	2	-	-	-	-	-	-	-	-	-
74	Dibenzo(a,h)Anthracene	610 HPLC	-	10	0.1	-	-	-	-	-	-	-	-	-
86	Fluoranthene	610 HPLC	10	1	0.05	-	-	-	-	-	-	-	-	-
87	Fluorene	610 HPLC	-	10	0.1	-	-	-	-	-	-	-	-	-
92	Indeno(1,2,3-cd)Pyrene	610 HPLC	-	10	0.05	-	-	-	-	-	-	-	-	-
100	Pyrene	610 HPLC	-	10	0.05	-	-	-	-	-	-	-	-	-
68	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5	-	-	-	-	-	-	-	-	-	-

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
70	Butylbenzyl Phthalate	606 or 625	10	10	-	-	-	-	-	-	-	-	-	-
79	Diethyl Phthalate	606 or 625	10	2	-	-	-	-	-	-	-	-	-	-
80	Dimethyl Phthalate	606 or 625	10	2	-	-	-	-	-	-	-	-	-	-
81	Di-n-Butyl Phthalate	606 or 625	-	10	-	-	-	-	-	-	-	-	-	-
84	Di-n-Octyl Phthalate	606 or 625	-	10	-	-	-	-	-	-	-	-	-	-
59	Benzidine	625	-	5	-	-	-	-	-	-	-	-	-	-
65	Bis(2-Chloroethoxy)Methane	625	-	5	-	-	-	-	-	-	-	-	-	-
66	Bis(2-Chloroethyl)Ether	625	10	1	-	-	-	-	-	-	-	-	-	-
67	Bis(2-Chloroisopropyl) Ether	625	10	2	-	-	-	-	-	-	-	-	-	-
69	4-Bromophenyl Phenyl Ether	625	10	5	-	-	-	-	-	-	-	-	-	-
71	2-Chloronaphthalene	625	-	10	-	-	-	-	-	-	-	-	-	-
72	4-Chlorophenyl Phenyl Ether	625	-	5	-	-	-	-	-	-	-	-	-	-
73	Chrysene	625	-	10	5	-	-	-	-	-	-	-	-	-
78	3,3'-Dichlorobenzidine	625	-	5	-	-	-	-	-	-	-	-	-	-
82	2,4-Dinitrotoluene	625	10	5	-	-	-	-	-	-	-	-	-	-
83	2,6-Dinitrotoluene	625	-	5	-	-	-	-	-	-	-	-	-	-
85	1,2-Diphenylhydrazine ^[7]	625	-	1	-	-	-	-	-	-	-	-	-	-
88	Hexachlorobenzene	625	5	1	-	-	-	-	-	-	-	-	-	-
89	Hexachlorobutadiene	625	5	1	-	-	-	-	-	-	-	-	-	-
90	Hexachlorocyclopentadiene	625	5	5	-	-	-	-	-	-	-	-	-	-
91	Hexachloroethane	625	5	1	-	-	-	-	-	-	-	-	-	-
93	Isophorone	625	10	1	-	-	-	-	-	-	-	-	-	-
94	Naphthalene	625	10	1	0.2	-	-	-	-	-	-	-	-	-
95	Nitrobenzene	625	10	1	-	-	-	-	-	-	-	-	-	-
96	N-Nitrosodimethylamine	625	10	5	-	-	-	-	-	-	-	-	-	-
97	N-Nitrosodi-n-Propylamine	625	10	5	-	-	-	-	-	-	-	-	-	-
98	N-Nitrosodiphenylamine	625	10	1	-	-	-	-	-	-	-	-	-	-
99	Phenanthrene	625	-	5	0.05	-	-	-	-	-	-	-	-	-
101	1,2,4-Trichlorobenzene	625	1	5	-	-	-	-	-	-	-	-	-	-

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
102	Aldrin	608	0.005	-	-	-	-	-	-	-	-	-	-	-
103	α -BHC	608	0.01	-	-	-	-	-	-	-	-	-	-	-
104	β -BHC	608	0.005	-	-	-	-	-	-	-	-	-	-	-
105	γ -BHC (Lindane)	608	0.02	-	-	-	-	-	-	-	-	-	-	-
106	δ -BHC	608	0.005	-	-	-	-	-	-	-	-	-	-	-
107	Chlordane	608	0.1	-	-	-	-	-	-	-	-	-	-	-
108	4,4'-DDT	608	0.01	-	-	-	-	-	-	-	-	-	-	-
109	4,4'-DDE	608	0.05	-	-	-	-	-	-	-	-	-	-	-
110	4,4'-DDD	608	0.05	-	-	-	-	-	-	-	-	-	-	-
111	Dieldrin	608	0.01	-	-	-	-	-	-	-	-	-	-	-
112	Endosulfan (alpha)	608	0.02	-	-	-	-	-	-	-	-	-	-	-
113	Endosulfan (beta)	608	0.01	-	-	-	-	-	-	-	-	-	-	-
114	Endosulfan Sulfate	608	0.05	-	-	-	-	-	-	-	-	-	-	-
115	Endrin	608	0.01	-	-	-	-	-	-	-	-	-	-	-
116	Endrin Aldehyde	608	0.01	-	-	-	-	-	-	-	-	-	-	-
117	Heptachlor	608	0.01	-	-	-	-	-	-	-	-	-	-	-
118	Heptachlor Epoxide	608	0.01	-	-	-	-	-	-	-	-	-	-	-
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5	-	-	-	-	-	-	-	-	-	-	-
126	Toxaphene	608	0.5	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

- ^[1] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.
- ^[2] The suggested method is the U.S. EPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another U.S. EPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.
- ^[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).

- ^[4] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).
- ^[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.
- ^[6] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, U.S. EPA 600/R-94-134, June 1994.
- ^[7] Detected as azobenzene.

ATTACHMENT H– PRETREATMENT REQUIREMENTS

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ATTACHMENT H: PRETREATMENT REQUIREMENTS

- 1.** The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 C.F.R. 403, including any regulatory revisions to Part 403. Where a Part 403 revision is promulgated after the effective date of the Discharger's permit and places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall complete the required actions within six months from the issuance date of this permit or six months from the effective date of the Part 403 revisions, whichever comes later.

(If the Discharger cannot complete the required actions within the above six-month period due to the need to process local adoption of sewer use ordinance modifications or other substantial pretreatment program modifications, the Discharger shall notify the Executive Officer in writing at least 60 days prior to the six-month deadline. The written notification shall include a summary of completed required actions, an explanation for why the six month deadline cannot be met, and a proposed timeframe to complete the rest of the required actions as soon as practical but not later than within twelve months of the issuance date of this permit or twelve months of the effective date of the Part 403 revisions, whichever comes later. The Executive Officer will notify the Discharger in writing within 30 days of receiving the request if the extension is not approved.)

The United States Environmental Protection Agency (U.S. EPA), the State and/or other appropriate parties may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the Clean Water Act (Act).

- 2.** The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The Discharger shall cause nondomestic users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.
- 3.** The Discharger shall perform the pretreatment functions as required in 40 C.F.R. 403 and amendments or modifications thereto including, but not limited to:
 - 3.1.** Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 C.F.R. 403.8(f)(1);
 - 3.2.** Implement the programmatic functions as provided in 40 C.F.R. 403.8(f)(2);
 - 3.3.** Publish an annual list of nondomestic users in significant noncompliance as provided per 40 C.F.R. 403.8(f)(2)(viii);

- 3.4.** Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 C.F.R. 403.8(f)(3); and
- 3.5.** Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 C.F.R. 403.5 and 403.6, respectively.
- 4.** The Discharger shall submit annually a report to U.S. EPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous calendar year. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix H-1 entitled, "Requirements for Pretreatment Annual Reports." The annual report is due each year on February 28.
- 5.** The Discharger shall submit a pretreatment semiannual report to U.S. EPA Region 9, the State Water Board and the Regional Water Board describing the status of its significant industrial users (SIUs). The report shall contain, but is not limited to, information specified in Appendix H-2 entitled, "Requirements for Pretreatment Semiannual Reports." The semiannual report is due July 31 for the period January through June. The information for the period July through December of each year shall be included in the Annual Report identified in Appendix H-1. The Executive Officer may exempt the Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and U.S. EPA's comment and approval.
- 6.** The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge (biosolids) as described in Appendix H-4 entitled, "Requirements for Influent, Effluent and Sludge (Biosolids) Monitoring." (The term "biosolids," as used in this Attachment, shall have the same meaning as wastewater treatment plant "sludge" and will be used from this point forward.) The Discharger shall evaluate the results of the sampling and analysis during the preparation of the semiannual and annual reports to identify any trends. Signing the certification statement used to transmit the reports shall be deemed to certify the Discharger has completed this data evaluation. A tabulation of the data shall be included in the pretreatment annual report as specified in Appendix H 4. The Executive Officer may require more or less frequent monitoring on a case by case basis.

APPENDIX H-1: REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on February 28 and shall contain activities conducted during the previous calendar year. The purpose of the Annual Report is to:

- Describe the status of the Discharger's pretreatment program; and
- Report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation.

The report shall contain, at a minimum, the following information:

1. Cover Sheet

The cover sheet shall include:

- 1.1. The name(s) and National Pollutant Discharge Elimination System (NPDES) permit number(s) of the Discharger(s) that is part of the Pretreatment Program;
- 1.2. The name, address and telephone number of a pretreatment contact person;
- 1.3. The period covered in the report;
- 1.4. A statement of truthfulness; and
- 1.5. The dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the publicly-owned treatment works (POTW) (40 C.F.R. 403.12(m)).

2. Introduction

This section shall include:

- 2.1. Any pertinent background information related to the Discharger and/or the nondomestic user base of the area;
- 2.2. List of applicable interagency agreements used to implement the Discharger's pretreatment program (e.g., Memoranda of Understanding (MOU) with satellite sanitary sewer collection systems); and
- 2.3. A status summary of the tasks required by a Pretreatment Compliance Inspection (PCI), Pretreatment Compliance Audit (PCA), Cleanup and Abatement Order (CAO), or other pretreatment-related enforcement actions required by the

Regional Water Board or the U.S. EPA. A more detailed discussion can be referenced and included in the section entitled, "Program Changes," if needed.

3. Definitions

This section shall include a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program, or the Discharger may provide a reference to its website if the applicable definitions are available on-line.

4. Discussion of Upset, Interference and Pass Through

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the Discharger's treatment plant(s) that the Discharger knows of or suspects were caused by nondomestic user discharges. Each incident shall be described, at a minimum, consisting of the following information:

- 4.1.** A description of what occurred;
- 4.2.** A description of what was done to identify the source;
- 4.3.** The name and address of the nondomestic user responsible;
- 4.4.** The reason(s) why the incident occurred;
- 4.5.** A description of the corrective actions taken; and
- 4.6.** An examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

5. Influent, Effluent and Biosolids Monitoring Results

The Discharger shall evaluate the influent, effluent and biosolids monitoring results as specified in Appendix H-4 in preparation of this report. The Discharger shall retain the analytical laboratory reports with the Quality Assurance and Quality Control (QA/QC) data validation and make these reports available upon request.

This section shall include:

- 5.1.** Description of the sampling procedures and an analysis of the results (see Appendix H-4 for specific requirements);

- 5.2. Tabular summary of the compounds detected (compounds measured above the detection limit for the analytical method used) for the monitoring data generated during the reporting year as specified in Appendix H-4;
- 5.3. Discussion of the investigation findings into any contributing sources of the compounds that exceed NPDES limits; and
- 5.4. Graphical representation of the influent and effluent metal monitoring data for the past five years with a discussion of any trends.

6. Inspection, Sampling and Enforcement Programs

This section shall include at a minimum the following information:

- 6.1. Inspections: Summary of the inspection program (e.g., criteria for determining the frequency of inspections and inspection procedures);
- 6.2. Sampling Events: Summary of the sampling program (e.g., criteria for determining the frequency of sampling and chain of custody procedures); and
- 6.3. Enforcement: Summary of Enforcement Response Plan (ERP) implementation including dates for adoption, last revision and submission to the Regional Water Board.

7. Updated List of Regulated SIUs

This section shall contain a list of all of the federal categories that apply to SIUs regulated by the Discharger. The specific categories shall be listed including the applicable 40 C.F.R. subpart and section, and pretreatment standards (both maximum and average limits). Local limits developed by the Discharger shall be presented in a table including the applicability of the local limits to SIUs. If local limits do not apply uniformly to SIUs, specify the applicability in the tables listing the categorical industrial users (CIUs) and non-categorical SIUs. Tables developed in Sections 7A and 7B can be used to present or reference this information.

- 7.1. CIUs - Include a table that alphabetically lists the CIUs regulated by the Discharger as of the end of the reporting period. This list shall include:
 - 7.1.1. Name;
 - 7.1.2. Address;
 - 7.1.3. Applicable federal category(ies);
 - 7.1.4. Reference to the location where the applicable Federal Categorical Standards are presented in the report;

- 7.1.5. Identify all deletions and additions keyed to the list submitted in the previous annual report. All deletions shall be briefly explained (e.g., closure, name change, ownership change, reclassification, declassification); and
- 7.1.6. Information, calculations and data used to determine the limits for those CIUs for which a combined waste stream formula is applied.
- 7.2.** Non-categorical SIUs - Include a table that alphabetically lists the SIUs not subject to any federal categorical standards that were regulated by the Discharger as of the end of the reporting period. This list shall include:
 - 7.2.1. Name;
 - 7.2.2. Address;
 - 7.2.3. A brief description of the type of business;
 - 7.2.4. Identify all deletions and additions keyed to the list submitted in the previous annual report. All deletions shall be briefly explained (e.g., closure, name change, ownership change, reclassification, declassification); and
 - 7.2.5. Indicate the applicable discharge limits (e.g., different from local limits) to which the SIUs are subject and reference to the location where the applicable limits (e.g., local discharge limits) are presented in the report.

8. SIU (categorical and non-categorical) Compliance Activities

The information required in this section may be combined in the table developed in Section 7 above.

- 8.1. Inspection and Sampling Summary:** This section shall contain a summary of all the SIU inspections and sampling activities conducted by the Discharger and sampling activities conducted by the SIU over the reporting year to gather information and data regarding SIU compliance. The summary shall include:
 - 8.1.1. The number of inspections and sampling events conducted for each SIU by the Discharger;
 - 8.1.2. The number of sampling events conducted by the SIU. Identify SIUs that are operating under an approved Total Toxic Organic Management Plan;
 - 8.1.3. The quarters in which the above activities were conducted; and
 - 8.1.4. The compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:

- 8.1.4.1. Consistent compliance;
- 8.1.4.2. Inconsistent compliance;
- 8.1.4.3. Significant noncompliance;
- 8.1.4.4. On a compliance schedule to achieve compliance (include the date final compliance is required);
- 8.1.4.5. Not in compliance and not on a compliance schedule; and
- 8.1.4.6. Compliance status unknown, and why not.

8.2. Enforcement Summary: This section shall contain a summary of SIU compliance and enforcement activities during the reporting year. The summary may be included in the summary table developed in section 8A and shall include the names and addresses of all SIUs affected by the actions identified below. For each notice specified in enforcement action 8.2.1 through 8.2.4, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

- 8.2.1. Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;
- 8.2.2. Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;
- 8.2.3. Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;
- 8.2.4. Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;
- 8.2.5. Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty;
- 8.2.6. Order to restrict/suspend discharge to the Discharger; and
- 8.2.7. Order to disconnect the discharge from entering the Discharger.

8.3. July-December Semiannual Data: For SIU violations/noncompliance during the semiannual reporting period from July 1 through December 31, provide the following information:

- 8.3.1. Name and facility address of the SIU;
- 8.3.2. Indicate if the SIU is subject to Federal Categorical Standards; if so, specify the category including the subpart that applies;
- 8.3.3. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard;
- 8.3.4. Indicate the compliance status of the SIU for the two quarters of the reporting period; and
- 8.3.5. For violations/noncompliance identified in the reporting period, provide:
 - 8.3.5.1. The date(s) of violation(s);
 - 8.3.5.2. The parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters; and
 - 8.3.5.3. A brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

9. Baseline Monitoring Report Update

This section shall provide a list of CIUs added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain the information specified in 40 C.F.R. 403.12(b). For each new CIU, the summary shall indicate when the BMR was due; when the CIU was notified by the Discharger of this requirement; when the CIU submitted the report; and/or when the report is due.

10. Pretreatment Program Changes

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to:

- 10.1.** Legal authority;
- 10.2.** Local limits;
- 10.3.** Monitoring/ inspection program and frequency;
- 10.4.** Enforcement protocol;
- 10.5.** Program's administrative structure;
- 10.6.** Staffing level;

10.7. Resource requirements;

10.8. Funding mechanism;

10.9. If the manager of the Discharger's pretreatment program changed, a revised organizational chart shall be included; and

10.10. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

11. Pretreatment Program Budget

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the total expenses required to implement the pretreatment program. A brief discussion of the source(s) of funding shall be provided. In addition, the Discharger shall make available upon request specific details on its pretreatment program expense amounts such as for personnel, equipment, and chemical analyses.

12. Public Participation Summary

This section shall include a copy of the public notice as required in 40 C.F.R. 403.8(f)(2)(viii). If a notice was not published, the reason shall be stated.

13. Biosolids Storage and Disposal Practice

This section shall describe how treated biosolids are stored and ultimately disposed. If a biosolids storage area is used, it shall be described in detail including its location, containment features and biosolids handling procedures.

14. Other Pollutant Reduction Activities

This section shall include a brief description of any programs the Discharger implements to reduce pollutants from nondomestic users that are not classified as SIUs. If the Discharger submits any of this program information in an Annual Pollution Prevention Report, reference to this other report shall satisfy this reporting requirement.

15. Other Subjects

Other information related to the Pretreatment Program that does not fit into any of the above categories should be included in this section.

16. Permit Compliance System (PCS) Data Entry Form

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information:

- 16.1.** Discharger's name,
- 16.2.** NPDES Permit number,
- 16.3.** Period covered by the report,
- 16.4.** Number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule,
- 16.5.** Number of notices of violation and administrative Orders issued against SIUs,
- 16.6.** Number of civil and criminal judicial actions against SIUs,
- 16.7.** Number of SIUs that have been published as a result of being in SNC, and
- 16.8.** Number of SIUs from which penalties have been collected.

APPENDIX H-2: REQUIREMENTS FOR JANUARY-JUNE PRETREATMENT SEMIANNUAL REPORT

The pretreatment semiannual report is due on July 31 for pretreatment program activities conducted from January through June unless an exception has been granted by the Regional Water Board's Executive Officer (e.g., pretreatment programs without any SIUs may qualify for an exception to the pretreatment semiannual report). Pretreatment activities conducted from July through December of each year shall be included in the Pretreatment Annual Report as specified in Appendix H-1. The pretreatment semiannual report shall contain, at a minimum the following information:

1. Influent, Effluent and Biosolids Monitoring

The influent, effluent and biosolids monitoring results shall be evaluated in preparation of this report. The Discharger shall retain analytical laboratory reports with the QA/QC data validation and make these reports available upon request. The Discharger shall also make available upon request a description of its influent, effluent and biosolids sampling procedures. Violations of any parameter that exceed NPDES limits shall be identified and reported. The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed.

2. Significant Industrial User (SIU) Compliance Status

This section shall contain a list of all SIUs that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. For the reported SIUs, the compliance status for the previous semiannual reporting period shall be included. Once the SIU has determined to be out of compliance, the SIU shall be included in subsequent reports until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

- 2.1.** Name and facility address of the SIU;
- 2.2.** Indicate if the SIU is subject to Federal Categorical Standards; if so, specify the category including the subpart that applies;
- 2.3.** For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard;
- 2.4.** Indicate the compliance status of the SIU for the two quarters of the reporting period; and
- 2.5.** For violations/noncompliance identified in the reporting period, provide:

- 2.5.1. The date(s) of violation(s);
- 2.5.2. The parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters; and
- 2.5.3. A brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

3. Discharger's Compliance with Pretreatment Program Requirements

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report or Pretreatment Compliance Inspection (PCI) Report. It shall contain a summary of the following information:

- 3.1. Date of latest PCA or PCI report;
- 3.2. Date of the Discharger's response;
- 3.3. List of unresolved issues; and
- 3.4. Plan(s) and schedule for resolving the remaining issues.

**APPENDIX H-3:
SIGNATURE REQUIREMENTS
FOR PRETREATMENT ANNUAL AND SEMIANNUAL REPORTS**

The pretreatment annual and semiannual reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Discharger (POTW - 40 C.F.R. section 403.12[m]). Signed copies of the reports shall be submitted to the State Water Board and the Regional Water Board through the electronic self-monitoring report (eSMR) module of the California Integrated Water Quality System (CIWQS). Signed copies of the reports shall also be submitted electronically to U.S. EPA at R9Pretreatment@epa.gov or as instructed otherwise.

APPENDIX H-4: REQUIREMENTS FOR INFLUENT, EFFLUENT, AND BIOSOLIDS MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and biosolids at the frequency shown in the pretreatment requirements table of the Monitoring and Reporting Program (MRP, Attachment E). When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both the influent and effluent monitoring requirements of the MRP and the Pretreatment Program. The Pretreatment Program monitoring reports as required in Appendices H-1 and H-2 shall be transmitted to the Pretreatment Program Coordinator.

1. Reduction of Monitoring Frequency

The minimum frequency of Pretreatment Program influent, effluent, and biosolids monitoring shall be dependent on the number of SIUs identified in the Discharger's Pretreatment Program as indicated in Table H-1.

Table H-1. Minimum Frequency of Pretreatment Program Monitoring

Number of SIUs	Minimum Frequency
< 5	Once every five years
> 5 and < 50	Once every year
> 50	Twice per year

If the Discharger's required monitoring frequency is greater than the minimum specified in Table H-1, the Discharger may request a reduced monitoring frequency for that constituent(s) as part of its application for permit reissuance if it meets the following criteria:

The monitoring data for the constituent(s) consistently show non-detect (ND) levels for the effluent monitoring and very low (i.e., near ND) levels for influent and biosolids monitoring for a minimum of eight previous years' worth of data.

The Discharger's request shall include tabular summaries of the data and a description of the trends in the industrial, commercial, and residential customers in the Discharger's service area that demonstrate control over the sources of the constituent(s). The Regional Water Board may grant a reduced monitoring frequency in the reissued permit after considering the information provided by the Discharger and any other relevant information.

2. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required sampling and test methods listed in the pretreatment table of the MRP. Any test method substitutions must have received prior written Executive Officer approval. Influent

and effluent sampling locations shall be the same as those sites specified in the MRP.

The influent and effluent samples should be taken at staggered times to account for treatment plant detention time. Appropriately staggered sampling is considered consistent with the requirement for collection of effluent samples coincident with influent samples in Section 3.1.3.1.2 of Attachment G. All samples must be representative of daily operations. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 C.F.R. 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated ML, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

The following report elements should be used to submit the influent and effluent monitoring results. A similarly structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Pretreatment Annual Report identified in Appendix H-1.

- 2.1.** Sampling Procedures, Sample Dechlorination, Sample Compositing, and Data Validation (applicable quality assurance/quality control) shall be performed in accordance with the techniques prescribed in 40 C.F.R. 136 and amendments thereto. The Discharger shall make available upon request its sampling procedures including methods of dechlorination, compositing, and data validation.
- 2.2.** A tabulation of the test results for the detected parameters shall be provided.
- 2.3.** Discussion of Results – The report shall include a complete discussion of the test results for the detected parameters. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

3. Biosolids Monitoring

Biosolids should be sampled in a manner that will be representative of the biosolids generated from the influent and effluent monitoring events except as noted in 3.3 below. The same parameters required for influent and effluent analysis shall be

included in the biosolids analysis. The biosolids analyzed shall be a composite sample of the biosolids for final disposal consisting of:

- 3.1.** Biosolids lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or
- 3.2.** Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or
- 3.3.** Dewatered biosolids - daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) each truckload, and shall be combined into a single 5-day composite.

The U.S. EPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to biosolids is recommended as a guidance for sampling procedures. The U.S. EPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to biosolids, is recommended as a guidance for analytical methods.

In determining if the biosolids are a hazardous waste, the Discharger shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, sections 66261.10 to 66261.24 and all amendments thereto.

The following report elements should be used to submit the biosolids monitoring results. A similarly structured form may be used but will be subject to Regional Water Board approval. The results shall be submitted with the Pretreatment Annual Report identified in Appendix H-1.

- Sampling Procedures and Data Validation (applicable quality assurance/quality control) shall be performed in accordance with the techniques prescribed in 40 C.F.R. 136 and amendments thereto. The Discharger shall make available upon request its biosolids sampling procedures and data validation methods.
- Test Results – Tabulate the test results for the detected parameters and include the percent solids.
- Discussion of Results – Include a complete discussion of test results for the detected parameters. If the detected pollutant(s) is reasonably deemed to have an adverse effect on biosolids disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or

destruction of pollutants attributable to chlorination/dechlorination
sampling and analysis practices shall be noted.

The Discharger shall also provide a summary table presenting any influent, effluent or biosolids monitoring data for non-priority pollutants that the Discharger believes may be causing or contributing to interference, pass through or adversely impacting biosolids quality.

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

1515 Clay Street, Suite 1400, Oakland, California 94612
waterboards.ca.gov/sanfranciscobay

**ORDER R2-2024-0013
NPDES PERMIT CA0038873**

The following dischargers (collectively, Dischargers and, individually, Discharger) are subject to waste discharge requirements (WDRs) set forth in this Order, for the purpose of regulating nutrient discharges to San Francisco Bay¹ and its contiguous bay segments:

Table 1. Discharger Information

Discharger	Facility Name	Facility Address	Minor/ Major
American Canyon, City of	Wastewater Treatment and Reclamation Facility	151 Mezzetta Court American Canyon, CA 94503	Major
Benicia, City of	Benicia Wastewater Treatment Plant	614 East Fifth Street Benicia, CA 94510	Major
Burlingame, City of	Burlingame Wastewater Treatment Plant	1103 Airport Boulevard Burlingame, CA 94010	Major
Central Contra Costa Sanitary District	Central Contra Costa Sanitary District Wastewater Treatment Plant	5019 Imhoff Place Martinez, CA 94553	Major
Central Marin Sanitation Agency	Central Marin Sanitation Agency Wastewater Treatment Plant	1301 Andersen Drive San Rafael, CA 94901	Major
Crockett Community Services District	Port Costa Wastewater Treatment Plant	End of Canyon Lake Drive Port Costa, CA 94569	Minor
Delta Diablo	Delta Diablo Wastewater Treatment Plant	2500 Pittsburg-Antioch Highway Antioch, CA 94509	Major
East Bay Dischargers Authority (EBDA); Cities of Hayward and San Leandro; Oro Loma Sanitary District; Castro Valley Sanitary District; Union Sanitary District; East Bay Regional Parks District; Livermore-Amador Valley Water	EBDA Common Outfall	EBDA Common Outfall 14150 Monarch Bay Drive San Leandro, CA 94577	Major
	Hayward Water Pollution Control Facility		
	San Leandro Water Pollution Control Plant		
	Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant		
	Raymond A. Boege Alvarado Wastewater Treatment Plant		

¹ San Francisco Bay consists of the Sacramento/San Joaquin River Delta, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Richardson Bay, Lower San Francisco Bay, and South San Francisco Bay.

San Francisco Bay Nutrients Watershed Permit
Municipal Wastewater Dischargers

Order R2-2024-0013
NPDES Permit CA0038873

Discharger	Facility Name	Facility Address	Minor/ Major
Management Agency; Dublin Ramon Services District; and City of Livermore	Livermore-Amador Valley Water Management Agency Export and Storage Facilities		
	Dublin San Ramon Services District Wastewater Treatment Plant		
	City of Livermore Water Reclamation Plant		
East Bay Municipal Utility District	East Bay Municipal Utility District, Special District No. 1 Wastewater Treatment Plant	2020 Wake Avenue Oakland, CA 94607	Major
Fairfield-Suisun Sewer District	Fairfield-Suisun Wastewater Treatment Plant	1010 Chadbourne Road Fairfield, CA 94534	Major
Las Gallinas Valley Sanitary District	Las Gallinas Valley Sanitary District Sewage Treatment Plant	300 Smith Ranch Road San Rafael, CA 94903	Major
Marin County (Paradise Cove), Sanitary District No. 5 of	Paradise Cove Treatment Plant	3700 Paradise Drive Tiburon, CA 94920	Minor
Marin County (Tiburon), Sanitary District No. 5 of	Wastewater Treatment Plant	2001 Paradise Drive Tiburon, CA 94920	Minor
Millbrae, City of	Water Pollution Control Plant	400 East Millbrae Avenue Millbrae, CA 94030	Major
Mt. View Sanitary District	Mt. View Sanitary District Wastewater Treatment Plant	3800 Arthur Road Martinez, CA 94553	Major
Napa Sanitation District	Soscol Water Recycling Facility	1515 Soscol Ferry Road Napa, CA 94558	Major
Novato Sanitary District	Novato Sanitary District Wastewater Treatment Plant	500 Davidson Street Novato, CA 94945	Major
Palo Alto, City of	Palo Alto Regional Water Quality Control Plant	2501 Embarcadero Way Palo Alto, CA 94303	Major
Petaluma, City of	Municipal Wastewater Treatment Plant	3890 Cypress Drive Petaluma, CA 94954	Major
Pinole, City of	Pinole-Hercules Water Pollution Control Plant	11 Tennent Avenue Pinole, CA, 94564	Major
Rodeo Sanitary District	Rodeo Sanitary District Water Pollution Control Facility	800 San Pablo Avenue Rodeo, CA 94572	Major
San Francisco (San Francisco International Airport), City and County of	Mel Leong Treatment Plant, Sanitary Plant	Bldg. 924 Clearwater Drive San Francisco, CA 94128	Major
San Francisco (Southeast Plant), City and County of	Southeast Water Pollution Control Plant	750 Phelps Street San Francisco, CA 94124	Major
San Jose and Santa Clara, Cities of	San Jose/Santa Clara Water Pollution Control Plant	700 Los Esteros Road San Jose, CA 95134	Major
San Mateo, City of	City of San Mateo Wastewater Treatment Plant	2050 Detroit Drive San Mateo, CA 94404	Major
Sausalito-Marin City Sanitary District	Sausalito-Marin City Sanitary District Wastewater Treatment Plant	1 East Road Sausalito, CA 94965	Major

Discharger	Facility Name	Facility Address	Minor/ Major
Sewerage Agency of Southern Marin	Sewerage Agency of Southern Marin Wastewater Treatment Plant	450 Sycamore Avenue Mill Valley, CA 94941	Major
Silicon Valley Clean Water	Silicon Valley Clean Water Wastewater Treatment Plant	1400 Radio Road Redwood City, CA 94065	Major
Sonoma Valley County Sanitation District	Municipal Wastewater Treatment Plant	22675 8th Street East Sonoma, CA 95476	Major
South San Francisco and San Bruno, Cities of	South San Francisco and San Bruno Water Quality Control Plant	195 Belle Air Road South San Francisco, CA 94080	Major
Sunnyvale, City of	Sunnyvale Water Pollution Control Plant	1444 Borregas Avenue, Sunnyvale, CA 94089	Major
Treasure Island Development Authority	Treasure Island Wastewater Treatment Plant	1220 Avenue M San Francisco, CA 94130	Major
Vallejo Flood and Wastewater District	Vallejo Flood and Wastewater District Wastewater Treatment Plant	450 Ryder Street Vallejo, CA 94590	Major
West County Agency; West County Wastewater District; City of Richmond; and Richmond Municipal Sewer District	West County Agency Combined Outfall	2910 Hilltop Drive Richmond, CA 94806	Major
	West County Wastewater District Treatment Plant		
	Richmond Municipal Sewer District Water Pollution Control Plant		

Table 2. Discharge Locations

Discharge locations are specified in the individual NPDES permits listed in Attachment B.

This Order was adopted on: **July 10, 2024**
This Order shall become effective on: **October 1, 2024**
This Order shall expire on: **September 30, 2029**
CIWQS regulatory measure number: **457777**

I hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) on the date indicated above.

Eileen White, Executive Officer

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1. FACILITY INFORMATION

Information describing the facilities subject to this Order is summarized in Table 1 and in Fact Sheet (Attachment F) sections 1 and 2.

2. FINDINGS

The Regional Water Board finds the following:

2.1. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for point source discharges of nutrients from the Discharger facilities listed in Attachment B to surface waters.

2.2. Background and Rationale for Requirements. San Francisco Bay is the West Coast's largest estuary and home to over seven million people. It has long been recognized as a nutrient-enriched estuary with higher nitrogen and phosphorus concentrations than most estuaries in the world. Too much nitrogen and phosphorous can result in excessive phytoplankton growth, which can be associated with harmful algal blooms and low dissolved oxygen levels. In San Francisco Bay, nitrogen has more influence on phytoplankton growth than phosphorous. During the dry season, the Dischargers account for about 86 percent of the total nitrogen loading to San Francisco Bay.

Despite being nutrient rich, the Bay has historically resisted excessive phytoplankton growth due to its turbidity, which limits the light penetration necessary for phytoplankton growth; strong tidal mixing, which limits periods of stratification necessary for phytoplankton to thrive at the Bay's surface; and filter-feeding clams, which graze on phytoplankton. However, increasing phytoplankton levels in the early 2000s indicated that the Bay's resilience may be weakening, and the Region's population growth could increase nitrogen loads.

The Regional Water Board initiated a Nutrient Management Strategy in 2012 and convened a Steering Committee in 2014, with the participation of U.S. EPA, the Dischargers, scientific researchers, and non-governmental organizations. The Steering Committee oversees a Nutrient Science Program managed by the San Francisco Estuary Institute (SFEI).¹ The Nutrient Science Program includes

¹ SFEI is a premier science organization that has been rigorously monitoring and analyzing San Francisco Bay for pollutants through the Regional Monitoring Program and nutrients through the Nutrients Science Program through coordination with publicly owned treatment works, the Regional Water Board, U.S. EPA, and non-governmental organizations.

monitoring, modeling, and special studies to better understand and respond to the possibility that the Bay could be losing its resilience to high nutrient levels, to evaluate nutrient reduction alternatives to prevent or resolve adverse impacts to the Bay, and to establish a scientific basis for regulatory actions.

In 2014, the Regional Water Board issued the first Nutrients Watershed Permit to provide a consistent approach for regulating municipal wastewater treatment plants within the San Francisco Bay watershed. The permit required the Dischargers to (1) contribute \$880,000 per year to the Nutrient Science Program to support receiving water monitoring, modeling, and special studies to characterize the Bay's response to current and future nutrient loads; (2) monitor their effluent to characterize nutrient discharge concentrations and loads; and (3) evaluate opportunities to reduce nutrient discharges through treatment plant optimization and upgrades.

In 2019, the Regional Water Board reissued the Nutrients Watershed Permit. The permit required the Dischargers to (1) to contribute \$2.2 million per year to continue and enhance the Nutrient Science Program; (2) continue to monitor their effluent to characterize nutrient discharge concentrations and loads; and (3) to evaluate opportunities to reduce nutrient discharges through recycling treated wastewater or using wetlands systems and other nature-based or multi-benefit systems. The resulting information, with the previously compiled information about potential opportunities to reduce nutrient discharges through treatment plant optimization and upgrades, provides a complete suite of nutrient reduction strategies from which the Dischargers can select the most cost-effective actions that provide the most benefits.

In July and August 2022, San Francisco Bay experienced a significant harmful algal bloom that resulted in nuisance odors and massive fish kills due in part to loss of dissolved oxygen in the water from decaying algae. The harmful algal bloom resulted in thousands of dead fish and made national news.² While the causes of the harmful algal bloom are unknown, high levels of nutrients in Bay waters enabled its extensive propagation by providing fuel for the algae to consume. This event provided cause for the Regional Water Board to establish requirements in this reissued Nutrients Watershed Permit for nutrient load reductions to prevent or minimize the propagation of a future harmful algal bloom that could adversely affect beneficial uses of the Bay. Modeling and observational data demonstrate that San Francisco Bay can no longer assimilate current nutrient loads during the summer months without fueling a large algal bloom and significant fish kills as occurred in July and August 2022. Nutrient load reductions are necessary to comply with the biostimulatory substances water quality

² See, e.g., <https://www.nytimes.com/2022/08/30/us/fish-dead-algae-bloom-california.html?searchResultPosition=1> and <https://www.cnn.com/2022/09/03/us/san-francisco-bay-area-algae-fish/index.html>.

objective, which provides that waters shall not contain such substances in concentrations that promote aquatic growths to the extent that they cause nuisance or adversely affect beneficial uses.

The Regional Water Board developed the requirements in this Order based on information the Dischargers submitted, information obtained through monitoring and reporting programs, and other available information. The Fact Sheet contains background information and rationales for this Order's requirements and is hereby incorporated into, and constitutes findings for, this Order. Attachments A, B, C, D, and E are also incorporated into this Order.

This Order requires the Dischargers to reduce dry season total inorganic nitrogen loads to San Francisco Bay by 40 percent regionwide compared to 2022 loads over a 10-year period, which is the maximum time allowed in an NPDES permit by the State Water Resources Control Board's (State Water Board) *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy; Resolution 2008-0025). The load reduction was developed using a model created by SFEI, which manages the Nutrients Science Program. The nitrogen load reductions this Order requires are the minimum necessary to protect the Bay's aquatic life from an algal bloom that could form under ambient conditions similar to those in July and August 2022 (e.g., weak tides, solar irradiance, low wind speed, low turbidity, and warm temperature) when the large algal bloom fueled by available nitrogen resulted in massive fish kills.

The cost to implement these load reductions will be significant. In response to the first Nutrients Watershed Permit requirement to evaluate opportunities to reduce nutrient discharges through treatment plant optimization and upgrades, the Dischargers prepared a report, *Bay Area Clean Water Agencies Nutrient Reduction Study: Potential Nutrient Reduction by Treatment Optimization, Sidestream Treatment, Treatment Upgrades, and Other Means*, dated June 22, 2018. The evaluation found that to implement conventional technologies to reduce total nitrogen concentrations below 15 mg/L during the dry season would cost about \$8.8 billion regionwide in 2018 dollars, which amounts to nearly \$11 billion in 2024.

This Order requires Dischargers to take steps to comply with the 40 percent load reduction requirement within 10 years, while maintaining at least current performance in the interim. If a Discharger cannot comply within 10 years, the Regional Water Board will consider regulatory mechanisms as warranted and as available to grant more time (see Fact Sheet section 6.3.5). This Order recognizes that multi-benefit solutions, such as nature-based treatment or water recycling, may take longer than 10 years to implement, and the Regional Water Board will use any available regulatory mechanisms to allow more time for these projects to be implemented.

This Order requires Dischargers to continue funding the Nutrient Science Program. For the permit reissuance scheduled for 2029, the Regional Water Board will consider any new information available (e.g., observational data, improved load response modeling, and other scientific updates generated by the Nutrient Science Program) to reassess and refine the final limits in this Order to ensure that they remain appropriate to protect San Francisco Bay beneficial uses. This may involve adjusting the magnitude of the required load reductions, the spatial scale for the load reductions (e.g., by subembayment instead of baywide), or the time-period used to evaluate nitrogen loading.

2.3. Notification of Interested Parties. The Regional Water Board notified the Dischargers and interested agencies and persons of its intent to prescribe these WDRs and has provided an opportunity to submit written comments and recommendations. Fact Sheet section 8.1 provides details regarding the notification.

2.4. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Fact Sheet section 8.4 provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order R2-2019-0017 (previous order) is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous order.

3. DISCHARGE PROHIBITIONS

This Order does not establish additional discharge prohibitions beyond those established in the individual NPDES permits listed in Attachment B of this Order.

4. EFFLUENT LIMITATIONS

4.1. Interim Effluent Limitations. The Dischargers shall comply with the following interim seasonal effluent limitations at the discharge points and monitoring locations specified in the Monitoring and Reporting Program (MRP) (Attachment E). Final effluent limitations shall become effective in accordance with the compliance schedule established by Provision 6.3.3 of this Order. Compliance with these interim limitations shall be determined seasonally for each Discharger based on discharges from May 1 through September 30. Mass loads shall be determined by calculating each daily average total inorganic nitrogen load from daily flows and concentrations, averaging all resulting daily loads, and rounding to two significant figures.

Table 3. Interim Effluent Limitations

Discharger	Total Inorganic Nitrogen (kg/day)
American Canyon, City of	79
Benicia, City of	290
Burlingame, City of	610
Central Contra Costa Sanitary District	4,300
Central Marin Sanitation Agency	1,300
Crockett Community Services District	5.3
Delta Diablo	2,000
East Bay Dischargers Authority (EBDA)	9,000
City of Hayward	
City of San Leandro	
Oro Loma Sanitary District and Castro Valley Sanitary District	
Union Sanitary District	
Livermore-Amador Valley Water Management Agency	
Dublin San Ramon Services District	
City of Livermore	
East Bay Municipal Utility District	11,000
Fairfield-Suisun Sewer District	1,600
Marin County (Paradise Cove), Sanitary District No. 5 of	3.7
Marin County (Tiburon), Sanitary District No. 5 of	69
Millbrae, City of	340
Mt. View Sanitary District	190
Novato Sanitary District	210
Palo Alto, City of	2,900
Pinole, City of	460
Rodeo Sanitary District	50
San Francisco (San Francisco International Airport), City and County of	560
San Francisco (Southeast Plant), City and County of	11,000
San Jose and Santa Clara, Cities of	6,400
San Mateo, City of	1,700
Sausalito-Marín City Sanitary District	180
Sewerage Agency of Southern Marin	280
Silicon Valley Clean Water	3,000
South San Francisco and San Bruno, Cities of	1,500
Sunnyvale, City of	830
Treasure Island Development Authority	29
Vallejo Flood and Wastewater District	1,000

Discharger	Total Inorganic Nitrogen (kg/day)
West County Agency	1,100
West County Wastewater District	
City of Richmond and Richmond Municipal Sewer District	

4.2. Final Effluent Limitations. In accordance with the compliance schedule established by this Order in Provision 6.3.3, starting October 1, 2034, the Dischargers shall comply with the following final seasonal water quality-based effluent limitations at the discharge points and monitoring locations specified in the MRP. Compliance with these final limitations shall be determined seasonally based on discharges from May 1 through September 30. If the sum of all the individual Dischargers' total inorganic nitrogen mass loads is greater than the Aggregate Mass Load Limit set forth below, the Dischargers whose total inorganic nitrogen mass loads exceed their individual limitations shall be in violation of their individual limitations. Mass loads shall be determined by calculating each daily average total inorganic nitrogen load from daily flows and concentrations, averaging all resulting daily loads, and rounding to two significant figures. The Aggregate Mass Load shall be determined by summing each individual Dischargers' average mass load.

Table 4. Final Effluent Limitations

Discharger	Total Inorganic Nitrogen (kg/day) ^[2]
American Canyon, City of	62
Benicia, City of	120
Burlingame, City of	160
Central Contra Costa Sanitary District	2,300
Central Marin Sanitation Agency	480
Crockett Community Services District	3.7
Delta Diablo ^[1]	920
East Bay Dischargers Authority (EBDA)	4,200
City of Hayward	
City of San Leandro	
Oro Loma Sanitary District and Castro Valley Sanitary District	
Union Sanitary District	
Livermore-Amador Valley Water Management Agency	
Dublin San Ramon Services District	
City of Livermore	
East Bay Municipal Utility District	3,300
Fairfield-Suisun Sewer District	880
Marin County (Paradise Cove), Sanitary District No. 5 of	3.5

Discharger	Total Inorganic Nitrogen (kg/day) ^[2]
Marin County (Tiburon), Sanitary District No. 5 of	47
Millbrae, City of	100
Mt. View Sanitary District	78
Novato Sanitary District	140
Palo Alto, City of	1,200
Pinole, City of	190
Rodeo Sanitary District	38
San Francisco (San Francisco International Airport), City and County of	71
San Francisco (Southeast Plant), City and County of	3,300
San Jose and Santa Clara, Cities of	5,000
San Mateo, City of	670
Sausalito-Marín City Sanitary District	69
Sewerage Agency of Southern Marin	140
Silicon Valley Clean Water	880
South San Francisco and San Bruno, Cities of	560
Sunnyvale, City of	740
Treasure Island Development Authority	21
Vallejo Flood and Wastewater District	580
West County Agency	430
West County Wastewater District	
City of Richmond and Richmond Municipal Sewer District	
Aggregate Mass Load Limit (kg/day)	26,700

Footnote:

^[1] Delta Diablo may apply a discharge adjustment to its final discharge mass emission when determining compliance with its limit. The adjustment shall be based on measured total inorganic nitrogen levels from the reverse osmosis concentrate it receives from the City of Antioch's Brackish Water Desalination Project. Delta Diablo shall calculate the adjustment by using flow and total inorganic nitrogen concentrations in reverse osmosis concentrate that must be monitored at the same monitoring frequency as effluent in MRP Table E-4.

^[2] If a Discharger accepts wastewater from another agency for its recycled water supply, but then is unable to recycle it due to uncontrollable factors, the Discharger shall document such factors in its related self-monitoring reports.

5. RECEIVING WATER LIMITATIONS

The receiving water limitations for the biostimulatory substances water quality objective that are applicable to the Dischargers are established in the individual NPDES permits listed in Attachment B.

6. PROVISIONS

6.1. Standard Provisions. The Dischargers shall comply with the standard provisions in Attachment D and G of their individual NPDES permits listed in Attachment B of this Order.

6.2. Monitoring and Reporting Provisions. The Discharger shall comply with the Monitoring and Reporting Program (MRP, Attachment E) and future revisions thereto, and applicable monitoring and reporting requirements in Attachments D and G of their individual NPDES permits listed in Attachment B of this Order.

6.3. Special Provisions

6.3.1. Reopener Provisions. The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law or as otherwise authorized by law. Any Discharger may request a permit modification in accordance with 40 C.F.R section 122.62. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses as necessary.

- 6.3.1.1. If present or future investigations demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters;
- 6.3.1.2. If new or revised water quality objectives or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality objectives or wasteload allocations. Adoption of the effluent limitations in this Order does not restrict in any way future modifications based on legally adopted water quality objectives or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications;
- 6.3.1.3. If studies provide a basis for determining that a permit condition should be modified;
- 6.3.1.4. If a State Water Board precedential decision, new policy, new law, or new regulation is adopted;
- 6.3.1.5. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge; or
- 6.3.1.6. If the final effluent limitations for total inorganic nitrogen do not attain and maintain applicable water quality standards.

6.3.2. Monitoring, Modeling, and Subembayment Studies. Each Discharger listed in Table 1 shall conduct, or cause to be conducted, studies to continue to address the potential adverse impacts of nutrients on San Francisco Bay beneficial uses. The studies shall include the efforts described below:

- 6.3.2.1. **Support Receiving Water Monitoring.** Individually or in collaboration with other regional stakeholders, support receiving water monitoring for nutrients

and related constituents. These efforts shall supplement the monitoring the Regional Monitoring Program and other entities already undertake, by providing the following:

- 6.3.2.1.1. A network of nutrient monitoring locations to track nutrient concentrations, dissolved oxygen, turbidity, and phytoplankton biomass in San Francisco Bay;
- 6.3.2.1.2. Adequate data to support continued modeling of nutrient fate and transport in San Francisco Bay; and
- 6.3.2.1.3. Studies furthering the understanding of harmful algae bloom development, including, at a minimum, monitoring for algae species and toxins.
- 6.3.2.2 **Increase San Francisco Bay's Resilience.** Explore opportunities to restore wetlands or to increase the resiliency of San Francisco Bay against nutrient loading (e.g., eelgrass beds to increase dissolved oxygen).
- 6.3.2.3. **Support Science Plan Development and Implementation.** Individually or in collaboration with other regional stakeholders, support further development, update, and implementation of the Nutrient Science Program to implement the San Francisco Bay Nutrient Management Strategy and support consideration of future management actions, including the development of nutrient water quality objectives. The Nutrient Science Program shall include studies necessary to assess water quality attainment scenarios for San Francisco Bay as a whole and for specific subembayments. The modeling and monitoring described in Provision 6.3.2.1, above, shall inform the Nutrient Science Program and any future management actions.

By June 1, 2025, submit, or cause to be submitted, an updated science plan and schedule for proposed studies, and annually update and revise the plan and schedule as necessary by June 1 of each subsequent year.

6.3.3. **Compliance Schedule Milestones and Progress Reporting**

This Order establishes compliance schedules for Dischargers in Table 4 to meet the final water quality-based effluent limitations for total inorganic nitrogen within 10 years consistent with the State Water Board's Compliance Schedule Policy, as further explained in Fact Sheet section 4.2.1. To demonstrate progress in meeting these limits, each Discharger listed in Table 4 shall submit the information required below with the Annual Nutrients Report required by MRP section 5.2.2 starting with the Group Annual Report due April 1, 2025, and each year thereafter:

- 6.3.3.1. Summary of progress toward meeting the total inorganic nitrogen final effluent limitations in Table 4, including actions taken to reduce total

inorganic nitrogen loads. Table 5, below, includes specific milestones that must also be completed. Early Actors defined by Provision 6.3.6 shall instead provide annual status updates on project implementation.

Table 5. Compliance Schedule Milestones

Milestone	Compliance Date
<p>Identify Compliance Alternatives. Dischargers shall identify preliminary alternatives for meeting the final effluent limitations in Table 4. This may include traditional treatment infrastructure, optimization, nature-based solutions, recycled water, trading, or a combination thereof. The submittal shall note whether the identified alternatives require pilot projects.</p> <p>If a Discharger has already identified a compliance pathway (selected alternative or combination of alternatives), the Discharger shall instead describe the compliance pathway, begin implementation, and provide a status update.</p>	April 1, 2025
<p>Perform Alternatives Analysis. Dischargers shall evaluate the compliance alternatives and identify which alternative or combination of alternatives (i.e., compliance pathway) best achieves compliance with the final effluent limitations in Table 4.</p> <p>If a Discharger has already identified a compliance pathway, the Discharger shall provide a status update regarding implementation.</p> <p>If a Discharger plans to meet the final effluent limits in Table 4 solely or in part through treatment optimization, it shall include a schedule to complete the optimization portion of the work no later than May 1, 2028, and begin implementation in accordance with its schedule.</p>	April 1, 2026
<p>Submit Compliance Plan. Dischargers shall describe proposed improvements and provide an implementation schedule for major milestones for the compliance pathway identified above, including a schedule for design and construction of improvements.</p> <p>If a Discharger chooses to implement a Multi-Benefit Solution consistent with Provision 6.3.5, it shall submit a governance plan that documents partnerships and a memorandum of understanding or agreement among parties to implement nature-based solutions (e.g., land ownership and funding partnerships) or wastewater recycling (e.g., agreement between wastewater agencies, water purification entity, water contractors).</p>	April 1, 2027 ^[1]
<p>Submit Design Progress Report. If a Discharger intends to implement a capital project, such as sidestream, split-stream, or full-scale treatment, to comply with the final effluent limits in Table 4, it shall provide project details for each capital project, including a project description, estimated nutrient removal from the project, evidence that the planned improvements have moved into the design stage, the percent completion of the design, an updated implementation schedule, estimated capital costs, a financial assessment, and a funding strategy.</p>	April 1, 2028 ^[1]
<p>Submit Design Progress Report and Compliance Update. Dischargers shall summarize their progress toward meeting the final effluent limits in Table 4 and provide a status update regarding</p>	April 1, 2029 ^[1]

implementation of their compliance pathway and an updated implementation schedule. If a Discharger is implementing a capital project, it shall provide a status update on its progress from the previous year, including, at minimum, the percent completion of the design, the status of contract documents used to bid projects, and an updated implementation schedule for the capital project.	
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Footnote:

⁽¹⁾ The compliance date for this task shall be extended by one year if a Discharger experiences significant delays related to (1) the need to conduct pilot studies prior to design, (2) unsuccessful pilot studies that cause the Discharger to change course, (3) the need to develop agreements to pursue water recycling or nature-based solutions, (4) legal challenges, or (5) engineering challenges that are beyond the Discharger's control. The Discharger shall notify the Executive Officer at least 90 days before the deadline and provide documentation that it satisfies one of the conditions for an extension above.

6.3.3.2. Summary of changes to the project plans and design and construction schedules listed in the previous year's update and rationale for the changes along with any additional plans for nitrogen reductions if current planned projects will not achieve the final effluent limits in Table 4.

6.3.3.3. Notification of the Discharger's compliance or noncompliance with this provision.

6.3.4. **Regional Planning to Reduce Total Inorganic Nitrogen Loads.** The Dischargers listed in Table 4 and designated as "major" in Table 1 shall, individually or in collaboration with other regional stakeholders, develop a report that describes regionwide planning efforts to meet the final effluent limitations required by the end of the compliance schedule established through this permit. The report will complement individual reporting required by Provision 6.3.3 and provide a regionwide perspective toward ensuring compliance is achieved as soon as possible. The report shall include the following:

- a. Regional schedule that lays out the phasing of identified future projects;
- b. Identification of anticipated capital, operation, and maintenance costs of proposed projects, to the extent feasible for the level of planning;
- c. Description of anticipated financing alternatives and impacts on agency rates (i.e., the cost to the community) associated with the identified projects;
- d. Assessment of the impact of the proposed projects on other regulations or requirements (e.g., air and biosolids regulations);
- e. Identification of nutrient reduction projects that would occur beyond the compliance schedule established in Provision 6.3.3 (with a focus on recycled water and nature-based solution projects) with the potential to reduce baywide total inorganic nitrogen load to below 22,000 kg/day and below 17,600 kg/day (50 percent and 60 percent reduction from 2022 total inorganic nitrogen load); and

- f. Nutrient trading program, if Dischargers seek to engage in trading³, consistent with U.S. EPA's *Water Quality Trading Policy* (January 13, 2003) to facilitate achieving total inorganic nitrogen load reductions in Table 4. The proposed trading program should evaluate baywide and subembayment trading allowances that are supported by the best available science.
- 6.3.4.1. **Scoping Plan.** By July 1, 2025, the Dischargers shall, individually or in collaboration with regional stakeholders, submit a Scoping Plan describing the work proposed to develop the Final Report required below.
- 6.3.4.2. **Status Reports.** By July 1, 2026, and again by July 1, 2027, the Dischargers shall submit, or cause to be submitted, a status report describing the tasks completed and preliminary findings.
- 6.3.4.3. **Final Report.** By March 31, 2029, the Dischargers shall submit, or cause to be submitted, a Final Report describing the results of their evaluations.
- 6.3.5. **Multi-Benefit Solutions for Load Reductions.** Dischargers that identify long-term multi-benefit solutions⁴ (e.g., water recycling or nature-based solutions) that cannot be completed by the effective date of the final effluent limitations in Table 4 shall identify such projects by, and their intent to pursue and implement them, as required by Provision 6.3.3.1, including the due dates in Table 5. If these projects result in total inorganic nitrogen loads at or below the individual final effluent limitations in Table 4, the Regional Water Board will consider available regulatory mechanisms to provide more time to comply as explained in the Fact Sheet.
- Dischargers pursuing long-term multi-benefit solutions shall satisfy the requirements in Provision 6.3.3.
- 6.3.6. **Recognition of Early Actors.** Dischargers that have already completed or begun construction or implementation of projects to reduce total inorganic nitrogen discharges to San Francisco Bay by the effective date of this Order may qualify as early actors. These Dischargers shall provide updates with each

³ Water quality trading is a market-based approach that offers efficiency in achieving water quality improvements on a watershed basis. With more stringent limits for total inorganic nitrogen, water quality trading would allow one Discharger to control nitrogen at levels greater than required and sell "credits" to another Discharger, which would use the credits to supplement its level of treatment to comply with final effluent limitations. Trading capitalizes on economies of scale and the control cost differentials between and among sources.

⁴ Multi-benefit solutions refer to initiatives that incorporate nature-based solutions, such as horizontal levees, open water treatment wetlands, or wastewater recycling (both potable and non-potable). These projects are designed to reduce nutrient loads while also providing other benefits, such as enhancing flood control, increasing water supply, or improving habitat quality.

Annual Nutrients Report required by MRP section 5.2.2. Upon completion of these projects, if a Discharger's total inorganic nitrogen loads are above the individual final effluent limitations in Table 4, the Regional Water Board will consider available regulatory mechanisms to provide more time to comply as explained in Fact Sheet section 6.3.5.

- 6.3.7. **Report of Waste Discharge.** Each Discharger shall file a report of waste discharge as an application for updated WDRs in accordance with title 23, California Code of Regulations, section 2235.1 and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than March 31, 2029. To comply with this requirement, each Discharger may reference the date its individual permit application was submitted for reissuance of its individual permit. Additionally, each Discharger's application for permit reissuance must include nutrient data required by this Order. This requirement may also be satisfied by referencing individual self-monitoring reports. Alternatively, the Dischargers may choose to submit a collective report of waste discharge by including the above information for each Discharger covered by this Order in one application.

ATTACHMENT A – DEFINITIONS AND ABBREVIATIONS

DEFINITIONS

Arithmetic Mean (μ)

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

$$\text{Arithmetic mean} = \mu = \Sigma x / n$$

where: Σx is the sum of the measured ambient water concentrations,
and n is the number of samples

Bioaccumulative

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

Calendar Month(s)

Period from the first day of a month through the last day of a month (e.g., January 1 to January 31). For toxicity monitoring, the period is from the first day of a routine monitoring test to the day before the corresponding day of the next month (e.g., from June 15 to July 14), or to the last day of the next month if there is no corresponding day (e.g., January 31 to February 28).

Carcinogenic

Known to cause cancer in living organisms.

Daily Discharge

Either: (1) the total mass of a constituent discharged over a calendar day (12:00 a.m. through 11:59 p.m.) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit) for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of a constituent over a day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

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

Dilution Credit

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

Enclosed Bays

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

Estimated Chemical Concentration

Concentration that results from the confirmed detection of a substance below the ML by the analytical method.

Estuaries

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

Inland Surface Waters

All surface waters of the state that are not the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

Highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

Lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Median

Middle measurement in a data set. The median of a data set is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2+1)})/2$ (i.e., the midpoint between $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

Minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Appendix B.

Minimum Level (ML)

Concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone

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

Not Detected (ND)

Sample results less than the laboratory's MDL.

Persistent Pollutants

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

Pollutant Minimization Program

Program of waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of a Pollutant Minimization Program is to reduce all potential sources of a priority pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. Cost effectiveness may be considered when establishing the requirements of a Pollutant Minimization Program. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), is considered to fulfill the Pollutant Minimization Program requirements.

Pollution Prevention

Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board or Regional Water Board.

Regulatory Management Decision (RMD)

Decision that represents the maximum allowable error rates and thresholds for toxicity and non-toxicity that would result in an acceptable risk to aquatic life.

Reporting Level (RL)

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

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)

Measure of variability calculated as follows:

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

where: x is the observed value

μ is the arithmetic mean of the observed values

n is the number of samples

ABBREVIATIONS

°F	degrees Fahrenheit
°C	degrees Celsius
%	Percent
µg/L	Micrograms per liter
1/Discharge	Once per discharge
1/Day	Once per day
1/Month	Once per month
1/Quarter	Once per quarter
1/Week	Once per week
1/Year	Once per year
2/Month	Two times per month

2/Week	Twice per week
2/Year	Twice per year
B	Background concentration
C	Water quality criterion or objective
C-24	24-hour composite
CIWQS	California Integrated Water Quality System
Continuous	Measured continuously
Continuous/D	Measured continuously, and recorded and reported daily
Continuous/H	Measured continuously, and recorded and reported hourly
CTR	California Toxics Rule
CV	Coefficient of Variation
DMR	Discharge Monitoring Report
DNQ	Detected, but not quantified
DL	Detection level
ECA	Effluent Concentration Allowance
Grab	Grab sample
MDL	Method detection limit
MEC	Maximum effluent concentration
MG	Million gallons
mg/L	Milligrams per liter
mg/L as N	Milligrams per liter as nitrogen
MGD	Million gallons per day
ML	Minimum level
MRP	Monitoring and Reporting Program (Attachment E)
ND	Not detected
NTR	National Toxics Rule
NTU	Nephelometric turbidity units
ppt	Parts per thousand
RL	Reporting level
RPA	Reasonable potential analysis
SIP	<i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (State Implementation Policy)

SMR	Self-Monitoring Report
s.u.	Standard pH units
WDRs	Waste discharge requirements
WQBEL	Water quality-based effluent limitation

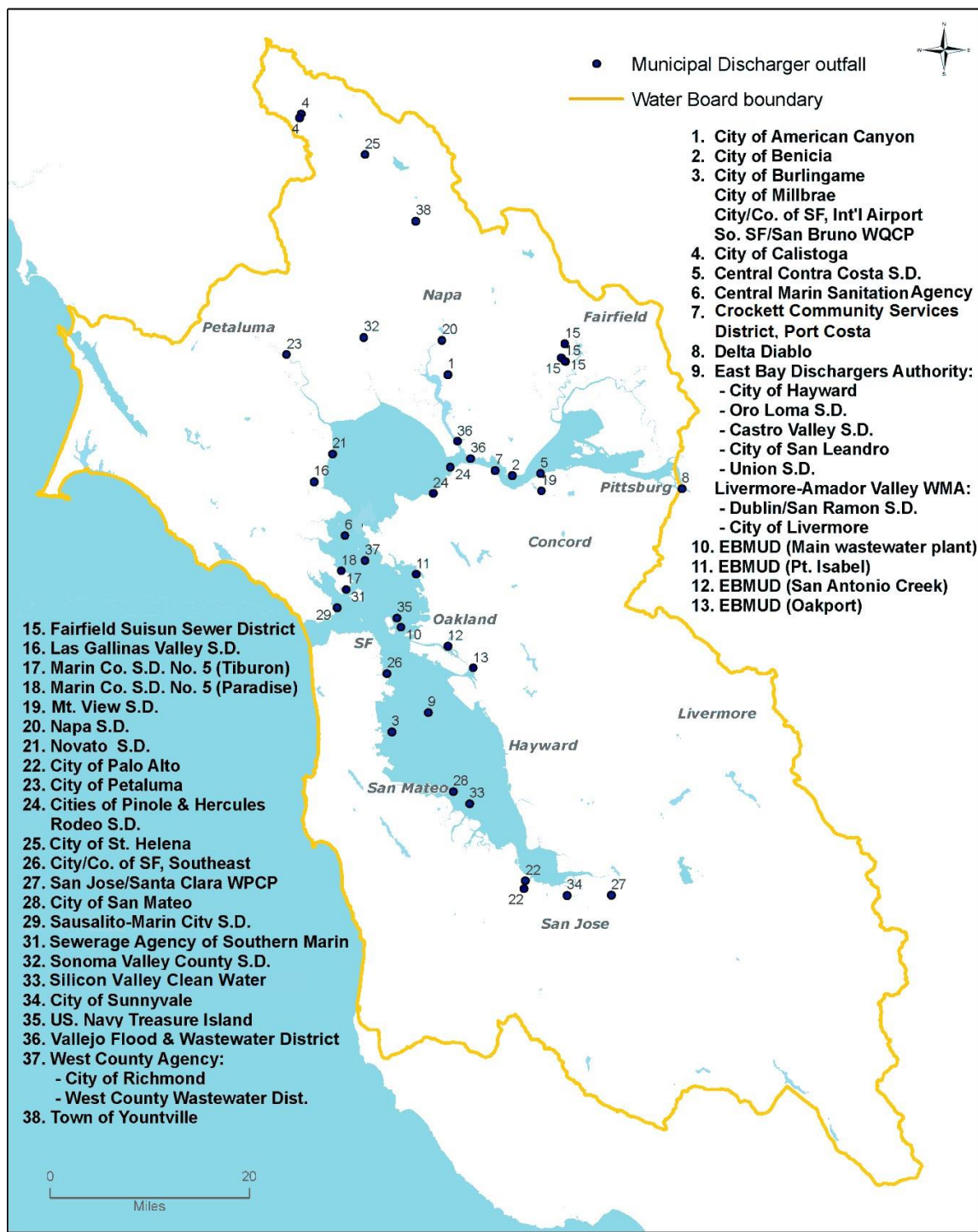
ATTACHMENT B – INDIVIDUAL NPDES PERMITS AND ORDER NUMBERS

Discharger	Individual NPDES Permit	Individual Order	Effective Date	Expiration Date
American Canyon, City of	CA0038768	R2-2022-0019	8/01/2022	7/31/2027
Benicia, City of	CA0038091	R2-2019-0034	2/01/2020	1/31/2025
Burlingame, City of	CA0037788	R2-2023-0010	1/01/2024	12/31/2028
Central Contra Costa Sanitary District	CA0037648	R2-2022-0020	8/01/2022	7/31/2027
Central Marin Sanitation Agency	CA0038628	R2-2023-0006	7/01/2023	6/30/2028
Crockett Community Services District	CA0037885	R2-2024-0009	8/01/2024	7/31/2029
Delta Diablo	CA0038547	R2-2019-0035	2/01/2020	1/31/2025
East Bay Dischargers Authority (EBDA)	CA0038769	R2-2022-0023	9/01/2022	8/31/2027
City of Hayward				
City of San Leandro				
Oro Loma Sanitary District and Castro Valley Sanitary District				
Union Sanitary District				
Livermore-Amador Valley Water Management Agency	CA0038679	R2-2021-0007	7/01/2021	6/30/2026
City of San Leandro – Treatment Wetland	CA0038881	R2-2022-0006	6/01/2022	5/31/2027
Oro Loma Sanitary District and Castro Valley Sanitary District – Wet Weather	CA0037559	R2-2024-0006	6/01/2024	5/31/2029
Union Sanitary District – Wet Weather	CA0038733	R2-2020-0027	12/01/2020	11/30/2025
Dublin San Ramon Services District	CA0037613	R2-2022-0024	9/01/2022	8/31/2027
City of Livermore	CA0038008	R2-2022-0025	9/01/2022	8/31/2027
East Bay Municipal Utility District	CA0037702	R2-2020-0024	11/01/2020	10/31/2025
Fairfield-Suisun Sewer District	CA0038024	R2-2020-0012	5/01/2020	4/30/2025
Las Gallinas Valley Sanitary District	CA0037851	R2-2020-0022	9/01/2020	8/31/2025
Marin County (Paradise Cove), Sanitary District No. 5 of	CA0037427	R2-2021-0017	12/01/2021	11/30/2026
Marin County (Tiburon), Sanitary District No. 5 of	CA0037753	R2-2023-0018	12/01/2023	11/30/2028
Millbrae, City of	CA0037532	R2-2024-0005	5/01/2024	4/30/2029
Mt. View Sanitary District	CA0037770	R2-2021-0026	2/01/2022	1/31/2027
Napa Sanitation District	CA0037575	R2-2022-0003	4/01/2022	3/31/2027
Novato Sanitary District	CA0037958	R2-2020-0019	9/01/2020	8/31/2025
Palo Alto, City of	CA0037834	R2-2019-0015	6/1/2019	5/31/2024
Petaluma, City of	CA0037810	R2-2021-0008	7/01/2021	6/30/2026
Pinole, City of	CA0037796	R2-2023-0008	8/01/2023	7/31/2028
Rodeo Sanitary District	CA0037826	R2-2022-0037	2/01/2023	1/31/2028

Discharger	Individual NPDES Permit	Individual Order	Effective Date	Expiration Date
San Francisco (San Francisco International Airport), City and County of	CA0038318	R2-2018-0045	12/01/2018	11/30/2023
San Francisco (Southeast Plant), City and County of	CA0037664	R2-2013-0029	10/01/2013	9/30/2018
San Jose and Santa Clara, Cities of	CA0037842	R2-2020-0001	4/01/2020	3/31/2025
San Mateo, City of	CA0037541	R2-2023-0017	12/01/2023	11/30/2028
Sausalito-Marín City Sanitary District	CA0038067	R2-2023-0022	1/01/2024	12/31/2028
Sewerage Agency of Southern Marin	CA0037711	R2-2023-0021	1/01/2024	12/31/2028
Silicon Valley Clean Water	CA0038369	R2-2023-0003	5/01/2023	4/30/2028
Sonoma Valley County Sanitation District	CA0037800	R2-2019-0019	9/01/2019	8/31/2024
South San Francisco and San Bruno, Cities of	CA0038130	R2-2019-0021	9/01/2019	8/31/2024
Sunnyvale, City of	CA0037621	R2-2020-0002	4/01/2020	3/31/2025
Treasure Island Development Authority	CA0110116	R2-2020-0020	8/01/2020	7/31/2025
Vallejo Flood and Wastewater District	CA0037699	R2-2023-0001	4/01/2023	3/31/2028
West County Agency	CA0038539	R2-2024-0008	8/01/2024	7/31/2029
West County Wastewater District				
City of Richmond and Richmond Municipal Sewer District				

ATTACHMENT C – MAP OF MUNICIPAL DISCHARGE LOCATIONS

Municipal Discharger outfall locations



ATTACHMENT D – STANDARD PROVISIONS

Refer to Attachment D in the individual permits listed in Attachment B of this Order.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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

1. GENERAL MONITORING PROVISIONS

- 1.1. Dischargers shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. section 122.63. If any discrepancies exist between this MRP and the “Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits” (Attachment G) in the individual permits listed in Attachment B of this Order, this MRP shall prevail.
- 1.2. Sampling is required during the entire year when discharging. Dischargers shall conduct all monitoring in accordance with Attachment D section 3, as supplemented by Attachment G of the individual permits listed in Attachment B. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. section 136 and must be specified in this permit.

2. MONITORING LOCATIONS

Dischargers shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements of this Order:

Table E-1. Monitoring Locations

Discharge Point	Monitoring Location	Monitoring Location Description
Influent	Individual monitoring locations for influent wastewater (normally Monitoring Location INF-001) are specified in the MRPs of the individual NPDES permits listed in Attachment B of this Order. ^[1]	Individual monitoring location descriptions are provided in the MRPs of the individual NPDES permits listed in Attachment B of this Order.
Effluent	Individual monitoring locations for discharges of treated wastewater (normally Monitoring Location EFF-001) are specified in the MRPs of the individual NPDES permits listed in Attachment B of this Order. ^[2]	Individual monitoring location descriptions are provided in the MRPs of the individual NPDES permits listed in Attachment B of this Order.

Footnotes:

- ^[1] For the City and County of San Francisco (Southeast Plant), influent monitoring shall occur only during dry weather (i.e., not during wet weather as defined in its individual NPDES permit as listed in Attachment B).
- ^[2] For the City and County of San Francisco (Southeast Plant), the monitoring location shall be Monitoring Location EFF-001A. For the Fairfield-Suisun Sewer District, the monitoring location shall be Monitoring Location EFF-001D.

3. INFLUENT MONITORING

Dischargers with a design flow ≥ 10 MGD, as described in Fact Sheet Table F-1, shall monitor treatment plant influent (typically at Monitoring Location INF-001) as shown in Tables E-2 and E-4, below.

Table E-2. Influent Monitoring

Parameter ^[1]	Unit	Sample Type ^[2]
Ammonia, Total	mg/L and kg/day as N	C-24
Total Kjeldahl Nitrogen (TKN)	mg/L and kg/day as N	C-24
Nitrate-Nitrite ^[3]	mg/L and kg/day as N	C-24
Phosphorus, Total	mg/L and kg/day as p	C-24

Footnotes:

- ^[1] Influent samples shall be collected concurrently with effluent samples.
- ^[2] 24-hour composites may be made up of four discrete grab samples collected over a 24-hour period and volumetrically or mathematically flow-weighted. During a 24-hour period, the samples may be collected only when the plant is staffed, if necessary.
- ^[3] If two years of monitoring data show all nitrate-nitrite concentrations a Discharger measures are below 2.0 mg/L, the Discharger may discontinue influent monitoring for this parameter.

4. EFFLUENT MONITORING

Dischargers shall monitor treatment plant effluent (typically at Monitoring Location EFF-001) as follows:

Table E-3. Effluent Monitoring

Parameter	Unit	Sample Type ^[1]
Ammonia, Total	mg/L and kg/day as N	C-24
Nitrate-nitrite	mg/L and kg/day as N	C-24
Inorganic Nitrogen, Total ^[2]	mg/L and kg/day as N	Calculated
Phosphorus, Total	mg/L and kg/day as p	C-24

Footnotes:

- ^[1] The 24-hour composites may be made up of four discrete grab samples collected over a 24-hour period and volumetrically or mathematically flow-weighted. During a 24-hour period, the samples may be collected only when the plant is staffed, if necessary. Monitoring for total ammonia, nitrate-nitrite, and total phosphorus shall be performed on the same day.
- ^[2] Total Inorganic Nitrogen = Total Ammonia + Nitrate-Nitrite. Dischargers may use approved analytical techniques that require filtration for analyte measurements that comprise Total Inorganic Nitrogen. When calculating total inorganic nitrogen, the Discharger shall assume data reported below the method detection limit equal half of the detection limit.

Table E-4. Minimum Sampling Frequencies

Discharger Size	Total Ammonia, Nitrate-Nitrite, Influent TKN, Effluent Total Inorganic Nitrogen Sampling Frequencies ^[1,2,3,4]	Total Phosphorous Sampling Frequency ^[1,2,3,4]
Major Dischargers (design flow ≥ 10 MGD)	Twice per month for effluent Once per quarter for influent	Once per month for effluent Twice per year for influent
Major Dischargers (design flow < 10 MGD)	Once per month for effluent	Once per quarter for effluent

Discharger Size	Total Ammonia, Nitrate-Nitrite, Influent TKN, Effluent Total Inorganic Nitrogen Sampling Frequencies ^[1,2,3,4]	Total Phosphorous Sampling Frequency ^[1,2,3,4]
Minor Dischargers (design flow < 1.0 MGD)	Twice per year for effluent ^[5]	Once per year for effluent

Footnotes:

- ^[1] Samples need only to be collected when discharging (i.e., seasonal Dischargers shall collect samples only during the discharge season). For compliance monitoring (between May 1 and September 30), samples shall be representative of dry season conditions. If effluent flows are higher than normal due to unseasonal wet weather that increases flows to the treatment plant or results in reduced recycled water demand the Discharger shall exclude these results from the dry season average used for compliance determination and shall include documentation in the transmittal letter of its monthly self-monitoring report that explains effluent flows during that period were higher than normal due to wet weather.
- ^[2] Dischargers that discharge through the East Bay Dischargers Authority Common Outfall (i.e., City of Hayward, City of San Leandro, Oro Loma Sanitary District and Castro Valley Sanitary District, Union Sanitary District, City of San Leandro – Treatment Wetland, and Dublin San Ramon Services District, and City of Livermore) shall monitor their individual wastewater treatment plant influent and effluent at least once per quarter.
- ^[3] Dischargers that discharge through the West County Agency Combined Outfall (i.e., West County Wastewater District and City of Richmond and Richmond Municipal Sewer District) shall monitor their individual wastewater treatment plant influent and effluent at least once per quarter.
- ^[4] The Livermore-Amador Valley Water Management Agency is not required to monitor influent or effluent, and neither the Union Sanitary District nor the Oro Loma Sanitary District is required to monitor effluent from its wet weather outfall.
- ^[5] Monitoring shall occur during the dry season (May - September).

5. REPORTING REQUIREMENTS

5.1. General Monitoring and Reporting Requirements. The Dischargers shall comply with all Standard Provisions (Attachments D and G of the individual NPDES permits) related to monitoring, reporting, and recordkeeping.

5.2. Individual Reporting in Self-Monitoring Reports (SMRs)

5.2.1. Routine SMRs. The Dischargers shall submit nutrients data collected to comply with this Order in the routine monthly or quarterly SMRs required by each Discharger's individual NPDES permit. Each SMR shall include all new nutrients monitoring results obtained since the last SMR was submitted. If a Discharger monitors nutrients more frequently than required by this Order at a monitoring location described in Table E-1, it shall include the results of such monitoring in the calculations and reporting for the relevant SMR.

5.2.2. Annual Nutrients Report. By January 1 of each year, each Discharger shall provide its nutrient information in a separate annual report or state that it is participating in a group report the Bay Area Clean Water Agencies (BACWA) will submit pursuant to Provision 5.2.2.5, below. Each Discharger shall submit the following:

5.2.2.1. Documentation that the Discharger is complying with Provisions 6.3.2, 6.3.3, 6.3.5, and 6.3.6 of the Order. If reporting through a group report as described below, the Discharger shall submit certification that it has provided adequate support (i.e., contributed its portion of the required contribution) in accordance with Provision 6.3.2.

- 5.2.2.2. Summary tables depicting the Discharger’s annual and monthly flows, nutrient concentrations, and nutrient mass loads, calculated as described in Attachment G section 8.1 (Arithmetic Calculations) of individual NPDES permits. The summary tables shall cover October 1 before the preceding year through September 30 of the preceding year and at least the previous five years of available data. Each Discharger shall document its nutrient loads relative to other facilities covered by this Order that discharge into the same subembayment (i.e., Suisun Bay, San Pablo Bay, Central Bay, South Bay, and Lower South Bay). These subembayment delineations may be refined through Provision 6.3.2 of the Order, in which case each Discharger shall document loads relative to the most recent delineation. Nutrient data from other Dischargers may be obtained from the State Water Board’s California Integrated Water Quality System (CIWQS) website (<https://www.waterboards.ca.gov/ciwqs/index.html>).
- 5.2.2.3. Analysis of nutrient trends and load variability, and assessment as to whether nutrient mass loads are increasing or decreasing.
- 5.2.2.4. A summary of the amount of water recycled annually by the Discharger, the corresponding decrease in the level of nutrients discharged to the Bay, and any updates to future water recycling plans.
- 5.2.2.5. Status and plans for investigation if the trend analysis shows a significant change in nutrient loading. In such cases, the Discharger shall investigate the cause. In the annual reports, the Discharger shall set forth its plans for investigation and report its results, providing necessary updates in subsequent annual reports. The investigation shall include, at a minimum, whether treatment process changes, increasing or decreasing water reclamation, or changes in total influent flow related to water conservation, population growth, transient work community, new industry, or wet weather flows have reduced or increased nutrient discharges.

As an alternative to submitting an individual Annual Nutrients Report, each Discharger may instead participate in a group report to be submitted by BACWA. By April 1 of each year, the Annual Group Nutrients Report shall include the information detailed in this provision.

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

Table E-5. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Continuous/D	Order effective date	All times
1/Week	First Sunday following or on Order effective date	Sunday through Saturday

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
1/Month	First day of calendar month following or on Order effective date	First day of calendar month through last day of calendar month
1/Quarter	Closest January 1, April 1, July 1, or October 1 before or after Order effective date ^{[1][2]}	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
1/Year	Closest January 1 before or after Order effective date ^[1]	January 1 through December 31
2/Year	Closest January 1 before or after Order effective date ^[1]	January 1 through June 30 July 1 through December 31

Footnote:

^[1] Monitoring performed during the previous order term may be used to satisfy monitoring required by this Order.

^[2] Definitions of 1/Quarter in the individual NPDES permits listed in Attachment B of this Order supersede this definition.

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

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

5.2.4.2. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For purposes of data collection, the Dischargers shall require the laboratory to write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

5.2.5.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected", or ND.

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

- 5.2.6. **Compliance Determination.** Compliance with effluent limitations shall be determined using sample reporting protocols defined above, in the Fact Sheet, in Attachment A, and in Attachments D and G of each individual permit. For purposes of reporting and enforcement, a Discharger shall be deemed out of compliance with interim effluent limitations if the average dry season (May 1 through September 30) mass load of total inorganic nitrogen in the dry season monitoring samples is greater than its individual effluent limitation.

For purposes of reporting and enforcement, a Discharger shall be deemed out of compliance with final effluent limitations if the average dry season mass load of the total inorganic nitrogen in dry season monitoring samples is greater than its effluent limitation and if the sum of all individual Dischargers' total inorganic nitrogen mass loads is greater than the Aggregate Mass Load Limit.

- 5.3. **Discharge Monitoring Reports (DMRs).** DMRs are U.S. EPA reporting requirements. The Dischargers shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or the latest upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](https://waterboards.ca.gov/water_issues/programs/discharge_monitoring) (waterboards.ca.gov/water_issues/programs/discharge_monitoring).

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

1. PERMIT INFORMATION

The following tables summarize administrative information related to each Discharger's facility.

Table F-1. Facility Information

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (MGD)
American Canyon, City of	Pam Phillips Environmental Services Manager (707) 647-4544	151 Mezzetta Court American Canyon, CA 94503 Napa County	Advanced Secondary	2.5
Benicia, City of	Jeff Gregory Wastewater Treatment Plant Superintendent (707) 746-4336	614 East Fifth Street Benicia, CA 94510 Solano County	Secondary	4.5
Burlingame, City of	Manuel Molina General Manager (650) 342-3727	501 Primrose Road Burlingame, CA 94010 San Mateo County	Secondary	5.5
Central Contra Costa Sanitary District	Lori Schectel Env. Compliance Manager (925) 229-7143	5019 Imhoff Place Martinez, CA 94553 Contra Costa County	Secondary	53.8
Central Marin Sanitation Agency	Chris Finton Treatment Plant Manager (415) 459-1455 x101	1301 Andersen Drive San Rafael, CA 94901 Marin County	Secondary	10
Crockett Community Services District	James Barnhill Sanitary Department Manager (510) 787-2992	P.O. Box 578 Crockett, CA 94525 Contra Costa County	Secondary	0.033
Delta Diablo	Amanda Roa Environmental Programs Manager (925) 756-1940	2500 Pittsburg-Antioch Highway Antioch, CA 94509 Contra Costa County	Secondary	19.5
East Bay Dischargers Authority (EBDA)	Jacqueline Zipkin General Manager (510) 278-5910	2651 Grant Avenue San Lorenzo, CA 94580 Alameda County	Secondary	107.8
City of Hayward				
City of San Leandro				
Oro Loma Sanitary District and Castro Valley Sanitary District				
Union Sanitary District				

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (MGD)
Livermore-Amador Valley Water Management Agency				
Dublin San Ramon Services District				
City of Livermore				
East Bay Municipal Utility District	Donald Gray Senior EH&S Specialist (925) 640-4738	P.O. Box 24055 Oakland, CA 94623-1055 Alameda County	Secondary	120
Fairfield-Suisun Sewer District	Meg Herston Director of Environmental Services (707) 428-9109	1010 Chadbourne Road Fairfield, CA 94534 Solano County	Advanced Secondary	23.7
Las Gallinas Valley Sanitary District	Mel Liebmann Chief Plant Operator (415) 472-1734	300 Smith Ranch Road San Rafael, CA 94903 Marin County	Secondary	2.92
Marin County (Paradise Cove), Sanitary District No. 5 of	Tony Rubio District Manager (415) 435-1501	P.O. Box 227 Tiburon, CA 94920 Marin County	Secondary	0.04
Marin County (Tiburon), Sanitary District No. 5 of	Tony Rubio District Manager (415) 435-1501	2001 Paradise Drive Tiburon, CA 94920 Marin County	Secondary	0.98
Millbrae, City of	Sam Bautista Public Works Director (650) 259-2347	621 Magnolia Avenue Millbrae, CA 94030 San Mateo County	Secondary	3.0
Mt. View Sanitary District	Lilia Corona District Manager (925) 228-5635 ext. 18	P.O. Box 2757 Martinez, CA 94553 Contra Costa County	Advanced Secondary	3.2
Napa Sanitation District	Andrew Damron General Manager (707) 258-6007	1515 Soscol Ferry Road Napa, CA 94558 Napa County	Secondary	15.4
Novato Sanitary District	Sandeep Karkal General Manager-Chief Engineer (415) 892-1694	500 Davidson Street Novato, CA 94945 Marin County	Secondary	7.0
Palo Alto, City of	James Allen Plant Manager (650) 329-2243	2501 Embarcadero Way, Palo Alto, CA 94303 Santa Clara County	Advanced Secondary	39
Petaluma, City of	Matthew Pierce Operations Supervisor (707) 776-3726	202 N. McDowell Blvd. Petaluma, CA 94954 Sonoma County	Secondary	6.7
Pinole, City of	Josh Binder Plant Manager (510) 724-8964	2131 Pear Street, Pinole, CA 94564 Contra Costa County	Secondary	4.06
Rodeo Sanitary District	Steve Beall District Manager (510) 799-2970 ext. 100	800 San Pablo Avenue Rodeo, CA 94572 Contra Costa County	Secondary	1.14

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (MGD)
San Francisco (San Francisco International Airport), City and County of	Jennifer Acton Env. Operations Manager (650) 455-9241	P.O. Box 8097 San Francisco, CA 94128 San Mateo County	Secondary	2.2
San Francisco (Southeast Plant), City and County of	Amy Chastain Regulatory Manager (415) 554-1683	1155 Market St., 11th Floor San Francisco, CA 94103 San Francisco County	Secondary	85.4
San Jose and Santa Clara, Cities of	Eric Dunlavey Wastewater Compliance Program Manager (408) 635-4017	700 Los Esteros Road San Jose, CA 95134 Santa Clara County	Advanced Secondary	167
San Mateo, City of	Michael Sutter Operations Superintendent (650) 522-7380	330 West 20 th Avenue San Mateo, CA 94403	Secondary	15.7
Sausalito-Marin City Sanitary District	Jeffrey Kingston General Manager (415) 332-0244	1 East Road Sausalito, CA 94965 Marin County	Secondary	1.8
Sewerage Agency of Southern Marin	Mark Grushayev General Manager (415) 388-2402	26 Corte Madera Ave. Mill Valley, CA 94941 Marin County	Secondary	3.6
Silicon Valley Clean Water	Monte Hamamoto Chief Operating Officer (650) 832-6266	1400 Radio Road Redwood City, CA 94065 San Mateo County	Secondary	29
Sonoma Valley County Sanitation District	Frank Mello Operations Coordinator (707) 521-1843	Sonoma County Water Agency 404 Aviation Blvd. Santa Rosa, CA 95403 Sonoma County	Secondary	3.0
South San Francisco and San Bruno, Cities of	Brian Schumacker Plant Superintendent (650) 829-3844	195 Belle Air Road South San Francisco, CA 94080 San Mateo County	Secondary	13
Sunnyvale, City of	Rohan Wikramanayake Water Pollution Control Plant Division Manager (781) 491-6177	Sunnyvale Water Pollution Control Plant P.O. Box 3707 Sunnyvale, CA 94088-3707 Santa Clara County	Advanced Secondary	29.5
Treasure Island Development Authority	Amy Chastain Regulatory Manager (415) 554-1683	1 Avenue of the Palms, Ste 241 San Francisco, CA 94130 San Francisco County	Secondary	2.0
Vallejo Flood and Wastewater District	Jennifer Harrington Environmental Services Director (707) 652-7806	450 Ryder Street Vallejo, CA 94590 Solano County	Secondary	15.5
West County Agency			Secondary	28.5

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (MGD)
West County Wastewater District	Aaron Winer Director of Water Quality and Resource Recovery (510) 837-6223	2910 Hilltop Drive Richmond, CA 94806 Contra Costa County		
City of Richmond and Richmond Municipal Sewer District				

Table F-2. Additional Facility Information

Discharger	Authorized Person to Sign and Submit Reports	Billing Address
American Canyon, City of	Pam Phillips Environmental Services Manager (707) 647-4544	151 Mezzetta Court American Canyon, CA 94503 Napa County
Benicia, City of	Jeff Gregory Wastewater Treatment Plant Superintendent (707) 746-4336	614 East Fifth Street Benicia, CA 94510 Solano County
Burlingame, City of	Manuel Molina General Manager (650) 342-3727	501 Primrose Road Burlingame, CA 94010 San Mateo County
Central Contra Costa Sanitary District	Lori Schectel Env. Compliance Manager (925) 229-7143	5019 Imhoff Place Martinez, CA 94553 Contra Costa County
Central Marin Sanitation Agency	Chris Finton Treatment Plant Manager (415) 459-1455 ext. 101	1301 Andersen Drive San Rafael, CA 94901 Marin County
Crockett Community Services District	James Barnhill Sanitary Department Manager (510) 787-2992	P.O. Box 578 Crockett, CA 94525 Contra Costa County
Delta Diablo	Joaquin Gonzalez Operations Manager (925) 756-1971	2500 Pittsburg-Antioch Highway Antioch, CA 94509 Contra Costa County
East Bay Dischargers Authority (EBDA)	Jacqueline Zipkin General Manager (510) 278-5910	2651 Grant Avenue San Lorenzo, CA 94580 Alameda County
City of Hayward		
City of San Leandro		
Oro Loma Sanitary District and Castro Valley Sanitary District		
Union Sanitary District		
Livermore-Amador Valley Water Management Agency		
Dublin San Ramon Services District		

San Francisco Bay Nutrients Watershed Permit
Municipal Wastewater Dischargers

Order R2-2024-0013
NPDES Permit CA0038873

Discharger	Authorized Person to Sign and Submit Reports	Billing Address
City of Livermore		
East Bay Municipal Utility District	Amit Mutsuddy Director of Wastewater (510) 287-1407	P.O. Box 24055, MS#59 Oakland, CA 94623-1055 Alameda County
Fairfield-Suisun Sewer District	Jordan Damerel Assistant General Manager/District Engineer (707) 428-9155	1010 Chadbourne Road Fairfield, CA 94534 Solano County
Las Gallinas Valley Sanitary District	Mel Liebmann Chief Plant Operator (415) 472-1734	300 Smith Ranch Road San Rafael, CA 94903 Marin County
Marin County (Paradise Cove), Sanitary District No. 5 of	Tony Rubio District Manager (415) 435-1501	P.O. Box 227 Tiburon, CA 94920 Marin County
Marin County (Tiburon), Sanitary District No. 5 of	Tony Rubio District Manager (415) 435-1501	2001 Paradise Drive Tiburon, CA 94920 Marin County
Millbrae, City of	Craig Centis Deputy Director of Public Works (650) 259-2376	621 Magnolia Avenue Millbrae, CA 94030 San Mateo County
Mt. View Sanitary District	Stacey Ambrose Environmental Services Manager (925) 228-5635 ext. 12	P.O. Box 2757 Martinez, CA 94553 Contra Costa County
Napa Sanitation District	Andrew Damron General Manager (707) 258-6007	1515 Soscol Ferry Road Napa, CA 94558 Napa County
Novato Sanitary District	Sandeep Karkal General Manager-Chief Engineer (415) 892-1694	500 Davidson Street Novato, CA 94945 Marin County
Palo Alto, City of	James Allen Plant Manager (650) 329-2243	2501 Embarcadero Way, Palo Alto, CA 94303 Santa Clara County
Petaluma, City of	Matthew Pierce Operations Supervisor (707) 776-3726	202 N. McDowell Blvd. Petaluma, CA 94954 Sonoma County
Pinole, City of	Josh Binder Plant Manager (510) 724-8964	2131 Pear Street, Pinole, CA 94564 Contra Costa County
Rodeo Sanitary District	Steve Beall District Manager (510) 799-2970 ext. 100	800 San Pablo Avenue Rodeo, CA 94572 Contra Costa County
San Francisco (San Francisco International Airport), City and County of	Leroy Sisneros Director of Facilities (650) 821-5400	P.O. Box 8097 San Francisco, CA 94128 San Mateo County

Discharger	Authorized Person to Sign and Submit Reports	Billing Address
San Francisco (Southeast Plant), City and County of	Andrew Clark Operations Superintendent (415) 920-4944	1155 Market St., 11th Floor San Francisco, CA 94103 San Francisco County
San Jose and Santa Clara, Cities of	Eric Dunlavey Wastewater Compliance Program Manager (408) 635-4017	700 Los Esteros Road San Jose, CA 95134 Santa Clara County
San Mateo, City of	Michael Sutter Operations Superintendent (650) 522-7380	330 West 20 th Avenue San Mateo, CA 94403
Sausalito-Marín City Sanitary District	Jeffrey Kingston General Manager (415) 332-0244	1 East Road Sausalito, CA 94965 Marin County
Sewerage Agency of Southern Marin	Mark Grushayev General Manager (415) 388-2402	26 Corte Madera Ave. Mill Valley, CA 94941 Marin County
Silicon Valley Clean Water	Monte Hamamoto Chief Operating Officer (650) 832-6266	1400 Radio Road Redwood City, CA 94065 San Mateo County
Sonoma Valley County Sanitation District	Frank Mello Operations Coordinator (707) 521-1843	Sonoma County Water Agency 404 Aviation Blvd. Santa Rosa, CA 95403 Sonoma County
South San Francisco and San Bruno, Cities of	Brian Schumacker Plant Superintendent (650) 829-3844	195 Belle Air Road South San Francisco, CA 94080 San Mateo County
Sunnyvale, City of	Rohan Wikramanayake Water Pollution Control Plant Division Manager (781) 491-6177	Sunnyvale Water Pollution Control Plant P.O. Box 3707 Sunnyvale, CA 94088-3707 Santa Clara County
Treasure Island Development Authority	Andrew Clark Operations Superintendent (415) 920-4944	1 Avenue of the Palms, Ste 161 San Francisco, CA 94130 San Francisco County
Vallejo Flood and Wastewater District	Jennifer Harrington Environmental Services Director (707) 652-7806	450 Ryder Street Vallejo, CA 94590 Solano County
West County Agency	Andrew Clough Agency Manager (510) 237-6603	2910 Hilltop Drive Richmond, CA 94806 Contra Costa County
West County Wastewater District		

Discharger	Authorized Person to Sign and Submit Reports	Billing Address
City of Richmond and Richmond Municipal Sewer District		

- 1.1.** The Dischargers listed in Table 1 own and operate their respective wastewater treatment plants and collection systems. The Dischargers provide secondary or advanced secondary treatment of wastewater collected from their service areas. After treatment, the Dischargers discharge to San Francisco Bay¹ and its tributaries, which are waters of the United States within the San Francisco Bay watershed. Details of the wastewater treatment processes and discharges are described in the individual NPDES permits listed in Attachment B. Attachment C shows a map of the primary discharge locations subject to this Order.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, and policies are held to be equivalent to references to the Discharger herein.

- 1.2.** The Dischargers are regulated pursuant to the individual NPDES permits listed in Attachment B and NPDES Permit CA0038873, previously Order R2-2019-0017 (previous order).
- 1.3.** The Dischargers are authorized to discharge nutrients subject to waste discharge requirements (WDRs) in this Order. Clean Water Act section 402(b)(1)(B) limits the duration of NPDES permits to a fixed term not to exceed five years (33 U.S.C. §1342(b)(1)(B); see also 40 C.F.R. § 122.46). Accordingly, Table 3 of this Order limits the effective period for this discharge authorization. Pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Dischargers comply with all requirements for continuation of expired permits (40 C.F.R § 122.6(d)).
- 1.4.** This Order is the third phase of what the Regional Water Board expects to be a multiple-permit-term effort. It establishes new interim and final effluent limitations to limit excessive eutrophication in San Francisco Bay. The purpose of this phase is to (1) establish interim effluent limitations for total inorganic nitrogen to ensure nutrient loads do not increase at individual treatment plants, (2) track and evaluate current and future nutrient loads from municipal dischargers, (3) fund nutrient monitoring programs, (4) support load response modeling, and (5) establish final numeric water quality-based effluent limitations that modeling and data indicate

¹ San Francisco Bay, as the term is used in this Order, refers to the Sacramento/San Joaquin River Delta generally west of and including Montezuma Island, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Richardson Bay, Lower San Francisco Bay, and South San Francisco Bay.

will meet the narrative biostimulatory water quality objective to protect beneficial uses and a compliance schedule to attain these final effluent limitations.

2. FACILITY DESCRIPTIONS

2.1. Wastewater Collection and Treatment

2.1.1. **Location and Service Area.** The municipal wastewater treatment plants are located throughout the San Francisco Bay region and described in the individual permits listed in Attachment B.

2.1.2. **Wastewater Treatment.** Municipal wastewater treatment plants provide secondary treatment, which includes screening, skimming, settling, and biological treatment. Some plants provide advanced secondary treatment, which can nitrify ammonia to make nitrate nitrogen. Plants also denitrify at various levels, which removes nitrogen from wastewater. The primary source of nutrients in municipal wastewater is human waste; therefore, most Dischargers have no practical way of controlling influent nutrient concentrations.

2.2. **Discharge Point and Receiving Waters.** Municipal wastewater treatment plants discharge throughout San Francisco Bay, including the Sacramento/San Joaquin River Delta generally west of and including Montezuma Island, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Richardson Bay, Lower San Francisco Bay, South San Francisco Bay, and connected tributaries. Discharge points and receiving waters are described in the individual permits listed in Attachment B. Primary discharge points are also shown in Attachment C.

2.3. **Previous Requirements and Monitoring Data.** The previous order required the Dischargers to continue developing and supporting necessary studies to support implementation of the San Francisco Bay Nutrient Management Strategy. The Dischargers submitted a Science Plan for the San Francisco Bay Nutrient Management Strategy on January 30, 2020, and have since submitted annual updates and continue to implement the studies.

The previous order also required the Dischargers to evaluate potential nutrient reduction by natural systems and water recycling. The Dischargers submitted a Nature-Based Solution for Nutrient Removal report on June 30, 2023. The report was prepared by the San Francisco Estuary Institute (SFEI), which conducted a regional desktop analysis to identify Dischargers that have the best opportunities to implement nature-based solutions for nutrient reduction. SFEI then conducted outreach to these Dischargers to develop and identify constraints and site-scale models. The results are summarized below:

- **Central Contra Costa Sanitary District.** The district is currently reviewing strategies to reduce total inorganic nitrogen discharges. One of the potential methods would be to convert its wet weather earthen basins to water treatment wetlands. This project is in the early evaluation stages.

- **Delta Diablo.** Delta Diablo was identified to be a strong candidate for nutrient removal using nature-based solution by preliminary assessments. It is currently developing designs and cost estimates. The project has not yet been reviewed by Delta Diablo executive staff or its board of directors.
- **Fairfield Suisun Sewer District.** The district is considering adding treatment wetlands to its treatment process. The facility has large wet-weather equalization basins and additional land where the district is evaluating construction of a multi-benefit wetland for resiliency and nutrient removal benefits. The district is seeking funding from outside sources for implementation.
- **Novato Sanitary District.** The district could construct either a horizontal levee or a vegetated freshwater wetland to augment its treatment system. It could partner with Marin County on existing funded projects in the area while seeking other funding sources through regional, state, and federal levels.
- **Sewerage Agency of Southern Marin.** The agency could build horizontal levees in its surrounding tidal marsh or retrofit its equalization basins with treatment wetlands.
- **San Jose/Santa Clara.** San Jose maintains significant open water wetlands and has begun evaluating the feasibility of converting decommissioned sludge lagoons to nature-based treatment. A regional flood protection levee project (i.e., the South San Francisco Bay Shoreline Project) would need to be completed before any potential nature-based treatment could be pursued.
- **South San Francisco/San Bruno.** While South San Francisco does not have much open land near the facility, it could convert old naval piers into a horizontal levee or treatment wetland.
- **Union Sanitary District.** In conjunction with the South Bay Salt Pond Restoration Project, the district explored the feasibility of building a horizontal levee on adjacent land. Although the district does not own the land, it has pledged support for the concept and will assist with moving the project forward. The district plans to significantly reduce nutrient discharges with treatment plant upgrades. Construction started in 2022 and is expected to be completed by 2029.

The next phase of this process is to focus on a smaller set of facilities to develop design and cost estimates, which will be submitted to the Regional Water Board by June 30, 2024.

In addition, several other Dischargers have explored nature-based solutions not evaluated in the regional study:

- **Oro Loma and Castro Valley Sanitary Districts.** The districts, along with partners at East Bay Dischargers Authority and East Bay Regional Park District, are continuing to advance design of the First Mile Horizontal Levee Project just south of the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant at Oro Loma Marsh. The project would treat up to 1 MGD of treatment plant effluent through a subsurface treatment layer in the horizontal levee, effectively removing nitrogen and emerging contaminants, while also providing flood protection, upland refugia for endangered species, and recreational opportunities for an underserved community. Funding has been secured to develop the project through final design and permitting.
- **City of San Leandro.** To demonstrate the feasibility of implementing nature-based solutions for building shoreline resiliency, creating habitat, and improving water quality, the City of San Leandro plans to convert an existing 6.9-acre wastewater storage basin into a shallow, freshwater, open-water wetland to provide polishing treatment for flows from a newly installed nitrification system. This constructed wetland is expected to polish about 10 percent of wastewater flows from the treatment plant. The City of San Leandro plans to start construction in 2024. The Regional Water Board permitted this discharge under Order R2-2022-0006 (NPDES Permit CA0038881).
- **City of Hayward.** Under a grant from U.S. EPA's Water Quality Improvement Fund, the City of Hayward completed a feasibility study that evaluated opportunities to construct a treatment wetland and horizontal levee at its former oxidation ponds. Under a second Water Quality Improvement Fund grant, the City of Hayward is evaluating this project in more detail. The project would use a portion of the oxidation ponds to create an optimized wetland that would provide nitrogen treatment during the dry season, while maintaining the wet weather storage function in the winter. The project would also include a horizontal levee at the edge of the wetlands to provide additional wastewater treatment and polishing, as well as flood protection and upland refugia for shoreline species as sea level rises.
- **Silicon Valley Clean Water.** Silicon Valley Clean Water is considering the feasibility of using nearby wetlands or upgrading its surrounding levee system to provide nature-based treatment for nitrogen removal.

The Dischargers also submitted a Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling report on June 28, 2023, summarizing feasible nutrient reductions through water recycling at different facilities. The table below projects water recycling through 2030 based on planned projects. The 2025 projections are more certain than those for 2030 because many of the later projects are conceptual and still require agreements between multiple agencies. Provision 6.3.4 requires Dischargers to submit a regional planning document that proposes how additional nutrient load reductions can be achieved, including through implementation of nature-based solutions and water recycling. Nutrient

reductions from recycled water will depend on nutrient concentrations in recycled water, end uses, and, for projects that use reverse osmosis, how the reverse osmosis concentrate is managed.

Table F-3. Current and Projected Water Recycling

Discharger	Average Daily Discharge Oct 2019-Sept 2020	2020 Water Recycled (MGD)	2020 Fraction Recycled	2025 Projected Water Recycled (MGD)	2030 Projected Water Recycled (MGD)
American Canyon, City of	1.22	0.313	0.26	0.619	0.619
Benicia, City of	1.8	-	-	-	-
Burlingame, City of	2.44	-	-	-	-
Central Contra Costa Sanitary District	33.3	1.6	0.05	1.95	2.24
Central Marin Sanitation Agency	9.01	0.024	0.00	0.024	0.024
Crockett Community Services District	0.0296	-	-	-	-
Delta Diablo	8.17	4.75	0.58	4.78	4.78
East Bay Dischargers Authority (EBDA)	62.1	6.0	0.10	6.5	6.8
Dublin San Ramon Services District	10	3.5	0.34	3.7	3.7
City of Hayward	11	0.8	0.07	1.1	1.2
City of Livermore	4.1	1.4	0.35	1.5	1.5
Oro Loma Sanitary District and Castro Valley Sanitary District	11	0.03	0.00	0.0	0.0
City of San Leandro	5.0	0.3	0.05	0.3	0.3
Union Sanitary District	23	0.0	-	0.0	0.0
East Bay Municipal Utility District	48.1	0.18	0.00	0.202	0.504
Fairfield-Suisun Sewer District	12.9	1.03	0.08	1.03	1.03
Las Gallinas Valley Sanitary District	1.93	0.975	0.51	0.975	0.975
Marin County (Paradise Cove), Sanitary District No. 5 of	0.0149	-	-	-	-
Marin County (Tiburon), Sanitary District No. 5 of	0.573	-	-	-	-
Millbrae, City of	1.48	-	-	-	-
Mt. View Sanitary District	1.19	1.15	0.97	1.18	1.21
Napa Sanitation District	3.54	3.3	0.93	3.4	3.4
Novato Sanitary District	2.75	1.47	0.53	1.45	5.03
Palo Alto, City of	19.5	0.705	0.04	0.752	13.7
Petaluma, City of	2.89	0.981	0.34	1.2	3.4

Discharger	Average Daily Discharge Oct 2019- Sept 2020	2020 Water Recycled (MGD)	2020 Fraction Recycled	2025 Projected Water Recycled (MGD)	2030 Projected Water Recycled (MGD)
Pinole, City of	2.27	-	-	-	-
Rodeo Sanitary District	0.551	-	-	-	-
San Francisco (San Francisco International Airport), City and County of	0.943	-	-	-	-
San Francisco (Southeast Plant), City and County of	46.8	-	-	-	-
San Jose and Santa Clara, Cities of	84.4	12.6	0.15	15	17
San Mateo, City of	9.92	-	-	-	-
Sausalito-Marin City Sanitary District	1.03	-	-	-	-
Sewerage Agency of Southern Marin	2.14	0.038	0.02	0.038	0.038
Silicon Valley Clean Water	13.7	0.856	0.06	1.23	1.31
Sonoma Valley County Sanitation District	2.21	2.21	1.00	2.24	2.24
South San Francisco and San Bruno, Cities of	7.34	-	-	-	-
Sunnyvale, City of	10.1	0.443	0.04	-	-
Treasure Island Development Authority	0.285	-	-	-	-
Vallejo Flood and Wastewater District	8.51	-	-	-	-
West County Agency West County Wastewater District City of Richmond and Richmond Municipal Sewer District	7.37	3.92	0.53	1.1	1.4
Total	408	43.2	0.11	52.8	76.4

2.4. Existing Nutrient Discharge Data

The previous order required Dischargers to collect the nutrient discharge data shown below. The table includes 2022 dry season daily average loads, which was used to calculate baywide load reductions, and the maximum dry season average from 2014 through 2017, which established a 2019 baseline for performance in the previous order.

Table F-4. Average Annual Dry Season Total Inorganic Nitrogen

Discharger	2019-2023 Average Loads (kg/day)	2022 Loads (kg/day)	2019 Established Baseline (kg/day)	Design Flow (MGD)
American Canyon, City of	18	11	80	2.5
Benicia, City of	220	200	240	4.5
Burlingame, City of	340	250	290	5.5
Central Contra Costa Sanitary District	3,700	3,700	3,700	53.8
Central Marin Sanitation Agency	1,100	1,100	1,200	10
Crockett Community Services District	-	-	-	0.033
Delta Diablo	1,200	950	1,500	19.5
East Bay Dischargers Authority (EBDA)	7,300	6,900	8,400	107.8
East Bay Municipal Utility District	8,900	10,000	9,800	120
Fairfield-Suisun Sewer District	960	1,000	1,100	23.7
Las Gallinas Valley Sanitary District	-	-	-	2.92
Marin County (Paradise Cove), Sanitary District No. 5 of	1.5	0.88	-	0.04
Marin County (Tiburon), Sanitary District No. 5 of	41	47	-	0.98
Millbrae, City of	270	240	290	3.0
Mt. View Sanitary District	89	42	120	3.2
Napa Sanitation District	-	-	-	15.4
Novato Sanitary District	85	-	-	7.0
Palo Alto, City of	2,100	2,200	2,600	39
Petaluma, City of	-	-	-	6.7
Pinole, City of	280	370	340	4.06
Rodeo Sanitary District	41	39	31	1.14
San Francisco (San Francisco International Airport), City and County of	110	91	340	2.2
San Francisco (Southeast Plant), City and County of	7,300	7,400	11,000	85.4
San Jose and Santa Clara, Cities of	3,700	2,500	5,300	167
San Mateo, City of	1,400	1,300	1,500	15.7
Sausalito-Marin City Sanitary District	130	110	150	1.8
Sewerage Agency of Southern Marin	230	250	190	3.6

Discharger	2019-2023 Average Loads (kg/day)	2022 Loads (kg/day)	2019 Established Baseline (kg/day)	Design Flow (MGD)
Silicon Valley Clean Water	2,500	2,500	2,500	29
Sonoma Valley County Sanitation District	-	-	-	3.0
South San Francisco and San Bruno, Cities of	1,200	1,200	920	13
Sunnyvale, City of	530	500	630	29.5
Treasure Island Development Authority	20	20	21	2.0
Vallejo Flood and Wastewater District	810	770	900	15.5
West County Agency West County Wastewater District City of Richmond and Richmond Municipal Sewer District	750	700	1,000	28.5
Aggregate Load (kg/day)	45,200	44,400	54,100	-

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. EPA, and Water Code chapter 5.5, division 7 (commencing with § 13370). It serves as an NPDES permit for point source municipal discharges of nutrients to surface waters from the named facilities listed in Attachment B of this Order.

3.2. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code division 13, chapter 3 (commencing with § 21100).

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. Water Quality Control Plan. The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, this Order implements State Water Board Resolution 88-63,

which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The beneficial uses applicable to San Francisco Bay include Agricultural Supply (AGR), Cold Freshwater Habitat (COLD), Ocean, Commercial, and Sport Fishing (COMM), Estuarine Habitat (EST), Industrial Service Supply (IND), Marine Habitat (MAR), Fish Migration (MIGR), Municipal and Domestic Supply (MUN), Navigation (NAV), Industrial Process Supply (PROC), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC1), Non-Contact Water Recreation (REC2), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD).

- 3.3.2. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 require that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
- 3.3.3. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.
- 3.3.4. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all applicable Endangered Species Act requirements.
- 3.4. **Impaired Water Bodies on CWA section 303(d) List.** On May 11, 2022, U.S. EPA approved a revised list of impaired waters pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the

Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for nonpoint sources and are established to achieve water quality standards. No San Francisco Bay segment is listed as impaired by nutrients.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters. The individual NPDES permits listed in Attachment B of this Order contain the applicable technology-based limitations for the discharges covered by this Order.

4.1. Water Quality-Based Effluent Limitations

4.1.1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require permits to include limitations more stringent than federal technology-based requirements where necessary to achieve water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, water quality-based effluent limitations (WQBELs) must be established using (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information. The process for determining reasonable potential and calculating WQBELs when necessary is intended to achieve applicable water quality objectives and criteria, and thereby protect designated beneficial uses of receiving waters.

4.1.2. Beneficial Uses and Water Quality Objectives

The Dischargers discharge to San Francisco Bay and its tributaries. Fact Sheet section 3.3.1 identifies the beneficial uses of San Francisco Bay and its

tributaries. Water quality objectives to protect these beneficial uses include the narrative biostimulatory substances objective in Basin Plan section 3.3.3:

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. Changes in chlorophyll a and associated phytoplankton communities follow complex dynamics that are sometimes associated with a discharge of biostimulatory substances. Irregular and extreme levels of chlorophyll a or phytoplankton blooms may indicate exceedance of this objective and require investigation.

4.1.3. Reasonable Potential Analysis

Municipal wastewater treatment plants are a significant source of nutrients to San Francisco Bay and nutrients pose a threat to San Francisco Bay beneficial uses. In San Francisco Bay, nitrogen is the growth-limiting nutrient.² Total inorganic nitrogen is the bioavailable form of nitrogen. As shown in the table below, municipal wastewater treatment plants account for about 86 percent of the annual average dry season total inorganic nitrogen load to San Francisco Bay and close to 100 percent of the total inorganic nitrogen load to Lower South Bay, South Bay, and Central Bay.³ The estimates in the table do not account for dry season inorganic nitrogen loads from other sources such as creeks, urban stormwater systems, or aerial deposition, because load estimates were not available and assumed to be relatively small.

Table F-5. Dry Season Average Total Inorganic Nitrogen

Subembayment	Municipal ^[1] (kg N/day)	Petroleum Refinery ^[2] (kg N/day)	Delta ^[3] (kg N/day)	Total (kg N/day)	Municipal (%)
Lower South Bay	6,300	-	-	6,300	100
South Bay	20,400	-	-	20,400	100
Central Bay	11,200	-	-	11,200	100
San Pablo Bay & Carquinez Strait	1,500	840	-	2,300	64
Suisun Bay	5,900	130	6,200	12,200	48
Baywide	45,200	970	6,200	52,400	86

Footnotes:

^[1] Average of data from 2018 through 2022.

^[2] Data from 2011. To gather more information on current total inorganic nitrogen loadings from refineries and assess potential treatment options, the Regional Water Board issued a 13383 order on January 26, 2024.

^[3] Data from *Nutrients in the Northern San Francisco Estuary* from SFEI in 2021.

² San Francisco Estuary Institute, Scientific Foundation for the San Francisco Bay Nutrient Management Strategy, Draft FINAL, October 2014, page 65.

³ San Francisco Estuary Institute, External Nutrient Loads to San Francisco Bay, January 2014, Table 6, page 27.

San Francisco Bay has long been recognized as nutrient-enriched. Despite this, the abundance of phytoplankton in the estuary is typically lower than what would be expected due to strong tidal mixing, which limits periods of stratification; high turbidity, which limits light penetration; and an abundant clam population, which feeds on the phytoplankton. Data from 2000 through 2020 indicated an increase in phytoplankton biomass in many areas of the estuary, suggesting that San Francisco Bay's historic resilience to the effects of nutrient enrichment was potentially weakening.⁴ The contributing factors for this decline may include (1) natural oceanic oscillations that have increased benthic predators, thus reducing South San Francisco Bay's clam population and clam grazing and (2) decreases in suspended sediment that have resulted in a less turbid environment and increased light penetration. Beginning in the late 1990s, phytoplankton growth in South San Francisco Bay increased sharply through 2010, then leveled off until 2022. The cause of this increase appears to have been a significant increase in fish, shrimp, and crab predators attributed to a change in natural oceanic oscillations bringing colder waters to San Francisco Bay.

Spring phytoplankton blooms are relatively frequent in San Francisco Bay, and fall blooms are becoming more frequent. The reasons are unknown, but the increases could be the result of a less turbid environment and less clam grazing. While San Francisco Bay experiences strong tidal mixing, there are two periods each year, between March and April and between September and October, during which there is less tidal mixing. Typically, these blooms are short-lived, lasting only 10 to 14 days and ending when tides increase and re-mix the water column.

While phytoplankton growth and biomass accumulation are limited much of the time by a lack of light and clam grazing, these limiting conditions were overcome in July and August 2022, when a large harmful algal bloom caused significant fish mortality. In late July 2022, an algae bloom formed in the deep channel between Alameda and Oakland. In early August, it spread from the Lower Bay to the South Bay, and by mid-to-late August, it had expanded throughout the Lower and South Bays. Researchers reported chlorophyll a values above 100 ug/L, which is about 20 times higher than typical values. There were observations of fish mortality, including sturgeon, leopard sharks, striped bass, and smaller fish throughout the Lower Bay, South Bay, Central Bay, and San Pablo Bay. Researchers recorded unusually low dissolved oxygen concentrations (below 3 mg/L) in large parts of the South Bay and Lower South Bay for several days after observing the fish mortality.

⁴ Cloern, J.E., Schraga, T.S., Nejad, E. et al. Nutrient Status of San Francisco Bay and Its Management Implications. *Estuaries and Coasts* 43, 1299–1317 (2020). <https://doi.org/10.1007/s12237-020-00737-w>.

The species associated with this bloom, *Heterosigma akashiwo*, is one of several species that can cause water to take on a reddish-brown color, commonly called a “red tide.” *Heterosigma akashiwo* was able to proliferate over such a large area of San Francisco Bay because the physical factors that typically limit algal growth were not present (e.g., turbidity levels were low). Because existing nutrient concentrations in San Francisco Bay are sufficient to support large and sustained algal blooms, it was possible for large areas of San Francisco Bay to experience excessive eutrophication, low dissolved oxygen levels, and fish mortality. These conditions were not limited to Lower Bay and South Bay because *Heterosigma akashiwo* was also observed in a significant portion of San Pablo Bay in July and August 2023.

As shown in Table F-5, municipal wastewater treatment plants contribute most of the total inorganic nitrogen discharged to San Francisco Bay. During the July and August 2022 bloom, total inorganic nitrogen levels were sufficient to support excessive algal growth, which adversely affected beneficial uses. As explained above, irregular and extremely high chlorophyll-a values and thousands of dead fish were observed. Therefore, this Order finds reasonable potential for the Dischargers, except those with a dry season discharge prohibition in their individual permits (i.e., Las Gallinas Valley Sanitation District, Napa Sanitation District, City of Petaluma, and Sonoma Valley County Sanitation District), to discharge total inorganic nitrogen at levels that could cause or contribute to an exceedance of the narrative biostimulatory substances objective during the dry season (May through September). This finding is consistent with U.S. EPA’s NPDES Permit Writers’ Manual (Publication Number: EPA-833-K-10-001, September 2010, section 6.3.1), which indicates that a permit writer may use effluent and receiving water data and modeling techniques, or a non-quantitative approach to evaluate whether there is reasonable potential to exceed a narrative water quality objective. There is no reasonable potential during the wet season because algal blooms during the wet season have been short-lived and have not adversely affected beneficial uses.

4.1.4. **Water Quality-Based Effluent Limitations**

- 4.1.4.1. **WQBEL Expression.** NPDES regulations at 40 CFR 122.45(d) require that all permit effluent limitations, standards, and prohibitions for continuous discharges from publicly-owned treatment works be expressed as average weekly and average monthly limitations, unless impracticable. Here, it is impracticable to express the total inorganic nitrogen effluent limitations as daily maximums, weekly averages, or monthly averages because developing limitations for the nutrients affecting San Francisco Bay and its tributaries is different from setting limitations for toxic pollutants. The exposure period of concern for nutrients is longer than one month, and the average exposure rather than the maximum exposure is of concern. The statistical procedures for developing effluent limits from the State Water Board’s *Policy for*

Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California (State Implementation Policy) would result in impracticable effluent limits for total inorganic nitrogen. If based on the procedures used for aquatic life protection that have water quality objectives based on exposure durations of one hour (acute) or four days (chronic), the maximum and average monthly effluent limits would be less stringent than the seasonal limits necessary to protect beneficial uses. Even if municipal wastewater treatment plants discharged total inorganic nitrogen in compliance with these monthly effluent limits, it would be possible for these dischargers to exceed the seasonal mass limit that must be met to protect beneficial uses. Such a result would be unacceptable.

The nutrient dynamics of San Francisco Bay and its tributaries are complex and also make expressing the total inorganic nitrogen effluent limitations as daily maximums, weekly averages, or monthly averages impracticable. Unlike many conventional pollutants that have direct and somewhat immediate effects on the aquatic system, nutrients have no known direct effect. Several conditions must be met for nutrients to affect the Bay ecosystem. These conditions delay and buffer the effects nutrients have on receiving waters. San Francisco Bay and its tributaries' biological and physical processes can be viewed as integrating the various nutrient loads from all sources over time. The integration ameliorates daily and monthly load fluctuations, with the Bay responding to overall loads on a seasonal basis, showing little response to the daily and monthly variations among individual sources. SFEI models the effect of nutrient loading to San Francisco Bay. Based on the model results, the Bay and its tributaries have been shown to integrate various point source loads over time. Thus, seasonal loading requirements (specifically requirements for the dry season from May 1 through September 30) will protect the Bay under the critical conditions that led to the July and August 2022 bloom. This is consistent with U.S. EPA's *Memorandum: Annual Permit Limits for Nitrogen and Phosphorus for Permits Designed to Protect Chesapeake Bay and its tidal tributaries from Excess Nutrient Loading under the National Pollutant Discharge Elimination System*, dated March 3, 2004, which found that a similar finding of impracticability pursuant to 40 C.F.R. section 122.45(d) may be appropriate when implementing nutrient criteria in other watersheds if supported with data and modeling that shows it is necessary to control long-term average loadings rather than short-term maximum loadings.

- 4.1.4.2. **Final Effluent Limitations.** Based on the reasonable potential analysis in Provision 4.1.3, above, this Order establishes effluent limitations for total inorganic nitrogen. Pursuant to 40 C.F.R. section 122.44(d)(1)(vi), where a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contribute to an excursion above a

narrative water quality objective, the permitting agency must establish effluent limits using one or more of the following options:

- (A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents;
- (B) Establish effluent limits on a case-by-case basis, using U.S. EPA's water quality criteria under CWA section 304(a), supplemented where necessary by other relevant information; or
- (C) Establish effluent limits based on an indicator parameter for the pollutant of concern.

This Order establishes effluent limits for total inorganic nitrogen by using a calculated numeric water quality criterion for dissolved oxygen that will attain and maintain the narrative biostimulatory substances water quality objective and fully protect beneficial uses, as allowed by 40 C.F.R. section 122.44(d)(1)(vi)(A). As explained in the *Memo on Numerical Translation of Narrative Objective*,⁵ a dissolved oxygen concentration for San Francisco Bay that is protective of beneficial uses under the acute condition of an algae bloom was calculated using the dissolved oxygen criterion for Suisun Marsh and other supplemental information (e.g., South Bay slough study).

The Nutrient Science Program has developed and continues to improve a coupled physical biogeochemical model, with input and feedback from scientific advisors, that accounts for the fate and transport of nutrient loads to the Bay and how nutrients affect or may affect primary productivity, dissolved oxygen, and harmful algal blooms in the Bay. A recent review⁶ by an independent panel of experts in physical and biogeochemical modeling, observations, and use of models to support decisions to manage eutrophication and other anthropogenic effects found that the model

⁵ San Francisco Bay Regional Water Board, *Memo on Numerical Translation of Narrative Objective*, February 2024.

⁶ *Findings and Recommendations of an Expert Panel Evaluating a Physical-Biogeochemical Model Supporting the San Francisco Bay Nutrient Management Strategy*: February 2023 Workshop

represents important transport processes and can reproduce the seasonal and spatial patterns of nutrient concentrations in the Bay.

The panel also found that the physical portion of the model used to predict the spatial patterns of nutrient concentrations is ready for near-term application. This Order's Aggregate Mass Load was calculated based on use of the physical portion of the model. This Order used the biogeochemical portion of the model to simulate nitrogen transformation, but did not use the biogeochemical portion of the model to predict chlorophyll-a and dissolved oxygen levels due to its limitations that will be resolved with ongoing and planned model improvements.

The Nutrient Science Program scientists at SFEI evaluated different total inorganic nitrogen load reduction scenarios using the physical portion of the model to determine the loads that San Francisco Bay can assimilate without having an excessive algal bloom that would result in unprotective dissolved oxygen levels.

Studies undertaken for Suisun Marsh and South Bay sloughs were used to establish a dissolved oxygen criterion that would protect beneficial uses under the acute conditions of a large algal bloom. The Suisun Marsh study evaluated the four species most sensitive to low dissolved oxygen concentrations to calculate an acute threshold. These species, from most tolerant to least tolerant, were striped bass, Mississippi silversides, American shad, and sturgeon. The resulting dissolved oxygen criterion was a minimum concentration of 3.8 mg/L. The South Bay slough study also evaluated the four species most sensitive to low dissolved oxygen concentrations to calculate an acute threshold. These species, from most tolerant to least tolerant, were sturgeon, killifish/topminnow, molly, and herring. The resulting dissolved oxygen criterion was a minimum concentration of 3.7 mg/L.

The species used for these calculations are generally representative of the most oxygen-sensitive species living in San Francisco Bay. Therefore, a protective dissolved oxygen concentration for San Francisco Bay would likely be close to 3.8 or 3.7 mg/L. To provide a margin of safety when applying the dissolved oxygen criteria for Suisun Marsh and the South Bay sloughs to all of San Francisco Bay, a dissolved oxygen concentration of 4.0 mg/L was selected to evaluate the model results for each subembayment.

U.S. EPA recognizes that beneficial uses can be supported even if water quality objectives are not achieved 100 percent of the time. U.S. EPA guidance provides an allowable exceedance threshold of 10 percent for

conventional pollutants, like dissolved oxygen.⁷ Like many states, California uses this guidance.⁸ For example, the California Listing Policy⁹, consistent with U.S. EPA guidance, allows for an exceedance frequency of up to 10 percent for conventional pollutants like dissolved oxygen to determine whether water quality standards are met. Accordingly, for purposes of this Order, the narrative biostimulatory substances water quality objective would be met if modeling results show that no more than 10 percent of the surface area in each subembayment has dissolved oxygen levels below 4.0 mg/L. When reissuing this permit, the Regional Water Board will consider additional endpoints, such as algal toxins, to interpret the narrative biostimulatory substances water quality objective if supported by new scientific evidence.

SFEI modeled different load reduction scenarios under the critical conditions of the July and August 2022 bloom and made worst-case assumptions for phytoplankton growth and decay. SFEI assumed that all available nitrogen would be converted to phytoplankton, and that all the phytoplankton produced would be digested by bacteria, a process that consumes oxygen. The “worst case” assumptions are appropriate because they represent what occurred during the July and August 2022 bloom. To determine nitrogen levels that are protective of beneficial uses, this Order only considers acute impacts because the effect of a large algae bloom on dissolved oxygen levels in San Francisco Bay, such as the July and August 2022 bloom, will occur over a period of a few days.

The results indicate that a baywide seasonal reduction in the total inorganic nitrogen loads from municipal wastewater treatment plants would need to be 40 percent below the loads that occurred during the 2022 bloom, or about 50 percent below the 2019 baseline conditions established in the previous order. According to the modeling, these lower total inorganic nitrogen loads would be sufficient to ensure that dissolved oxygen concentrations would fall below 4.0 mg/L in no more than 10 percent of any individual subembayment under the critical conditions of the 2022 bloom, a level protective of beneficial

⁷ Consolidated assessment and listing methodology toward a compendium of best practices. First edition. Washington, D.C.: Office of Wetlands, Oceans, and Watersheds, U.S. Environmental Protection Agency. 2002.

⁸ Functional Equivalent Document: Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List. September 2004.

⁹ The State Water Board adopted the Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List (Listing Policy). The Listing Policy describes the process by which the State Water Board and the nine Regional Water Quality Control Boards comply with the listing requirements of Clean Water Act section 303(d) and establishes a standard process to develop the list. To make decisions regarding standards attainment, the Listing Policy provides guidance for interpreting data and information as they are compared to beneficial uses, existing numeric and narrative water quality objectives, and antidegradation considerations.

uses under the acute condition of a large algae bloom. This reduction corresponds to a total aggregate average total inorganic nitrogen mass load of 26,700 kg/day (the total aggregate WQBEL in the Order).

This Order uses an aggregate approach to regulating total inorganic nitrogen because, once nitrogen loads are introduced into San Francisco Bay, mixing forces distribute and circulate nitrogen over a large area. The nitrogen concentrations in various portions of San Francisco Bay include loads from other dischargers and the combined contributions from the various dischargers determine the nitrogen levels that could potentially fuel algae blooms. This is reasonable because all portions of the estuary, including the North Bay, are vulnerable to algal blooms given the high concentrations of total inorganic nitrogen prevalent throughout the Bay.

This aggregate approach does not exclude major nutrient dischargers in the North Bay, like the Central Contra Costa Sanitary District, which is one of the top five dischargers of nutrients to the Bay and contributes over 50 percent of the nutrient discharge to North Bay from municipal wastewater treatment plants. The 40 percent baywide reduction in nitrogen needed to meet the objective and protect beneficial uses includes North Bay nitrogen discharges because they are not confined to the North Bay. Because the area is tidally influenced, these nutrients flow upstream to nutrient-sensitive areas in the Sacramento-San Joaquin Delta, an area known for its own nutrients-related problems. The Central Valley Regional Water Quality Control Board required the Sacramento Regional County Sanitation District (upstream of the Central Contra Costa Sanitary District outfall) to reduce its effluent nitrogen concentrations significantly (Order R5-2010-0114). North Bay discharges also flow through San Pablo Bay and Central Bay into the Pacific Ocean, another nutrient-sensitive area, and home to the Monterey Bay National Marine Sanctuary, Greater Farallones National Marine Sanctuary, and Cordell Bank National Marine Sanctuary. A small percentage of North Bay discharges even reach the South Bay.

Suisun Bay itself has measured total inorganic nitrogen levels that are comparable to the levels in the portions of the estuary where the 2022 algal bloom occurred, as explained in the *Memo on Numerical Translation of Narrative Objective*. Scientific evidence suggests that Suisun and San Pablo Bays are increasingly vulnerable to harmful algal blooms. Researchers have observed declining turbidity in the North Bay, which suggests that this portion

of the estuary is losing its resilience against high nutrient loads.¹⁰ Losing this resilience makes it more likely that algae can make efficient use of available nitrogen, which is already sufficiently concentrated to support a significant algal bloom. In fact, algal toxins from harmful freshwater and marine algae species have been routinely detected in San Pablo Bay and Suisun Bay at relatively high concentrations. Therefore, the 40 percent baywide reduction in nitrogen is needed in North Bay to meet the biostimulatory objective and protect beneficial uses.

The Regional Water Board calculated the final WQBELs for individual Dischargers based on meeting the total aggregate average load of 26,700 kg/day as follows. For the three minor Dischargers listed in Table 1 (i.e., design flow less than 1.0 MGD), the final individual WQBELs are based on 2022 loads (for Marin County [Tiburon] Sanitary District No. 5) and the maximum loading, accounting for variability, from the previous 10 years for the two smallest facilities (Crockett Community Services District and Marin County [Paradise Cove] Sanitary District No. 5). This is appropriate because previous orders did not require minor facilities to evaluate treatment upgrade options and they only contribute about 0.1 percent of the total aggregate average load to San Francisco Bay. For the remaining Dischargers, the individual WQBELs are based on the concentration that, when the various flows are considered, results in loads summing to the total aggregate average load of 26,700 kg/day, assuming 2022 dry season flows. This concentration is 20.5 mg/L total inorganic nitrogen. The resulting individual WQBELs are listed in Table 4 of the Order.

Compliance with these dry season (May 1 through September 30) WQBELs will be assessed based on dry season data because algal blooms large enough to significantly consume total inorganic nitrogen and depress oxygen concentrations have not been shown to occur in San Francisco Bay during the wet season.

Because the individual WQBELs are based on the total aggregate WQBEL, compliance with the WQBELs will be based first on the total aggregate WQBEL. Compliance with the aggregate WQBEL will be attained if the sum of all the individual Dischargers' total inorganic mass loads does not exceed the aggregate WQBEL. If the sum of the individual total inorganic nitrogen mass loads is greater than the aggregate WQBEL, only the Dischargers

¹⁰ Cloern J.E., Jassby, A.D. (2012). Drivers of change in estuarine-coastal ecosystems: Discoveries from four decades of study in San Francisco Bay. *Reviews of Geophysics*, October 2012.

whose total inorganic nitrogen mass loads exceed their individual WQBELs will be in violation of the WQBELs.

Provision 6.3.2 of this Order requires the Dischargers to continue supporting receiving water monitoring and modeling to better understand how San Francisco Bay assimilates nutrients. Advances in modeling and data collected over the next five years will inform the Regional Water Board on the need to reassess and refine the final WQBELs and whether subembayments should be treated differently. For the permit reissuance scheduled for 2029, the Regional Water Board will consider advances in the science related to nutrients loading and beneficial use protection and available new information (e.g., observational data and improved load response modeling) to reassess and refine the final WQBELs developed for this Order to ensure that they are appropriate to protect San Francisco Bay beneficial uses.

4.2. Compliance Schedules and Interim Effluent Limitations

4.2.1. Compliance Schedules

State Water Resources Control Board (State Water Board) Resolution 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy), authorizes the Water Board to include a compliance schedule in a permit for an existing discharger “to implement a new, revised, or newly interpreted water quality objective or criterion in a water quality standard that results in a permit limitation more stringent than the limitation previously imposed where the Water Board determines that the discharger has complied with the application requirements . . . [of the] Policy and has demonstrated that the discharger needs additional time to implement actions to comply with the limitation.”¹¹ These actions may include designing and constructing facilities or implementing new or significantly expanded programs and securing financing, if necessary. This Order applies to existing dischargers and newly interprets the Basin Plan’s narrative biostimulatory substances water quality objective to establish numeric total inorganic nitrogen WQBELs that are more stringent than the previous permit, which contained no numeric effluent limitations for total inorganic nitrogen. The Dischargers have demonstrated, and the Water Board agrees that this will require the Dischargers to design, finance, and construct facilities, as well as

¹¹ The Compliance Schedule Policy defines “newly interpreted water quality objective or criterion in a water quality standard” as “a narrative water quality objective or criterion that, when interpreted during NPDES permit development (using appropriate scientific information and consistent with state and federal law) to determine the permit limitations necessary to implement the objective, results in a numeric permit limitation more stringent than the limit in the prior NPDES permit issued to the discharger.” Resolution 2008-0025, section 1.e. “Permit limitation” is further defined as a “water quality-based effluent limitation (WQBEL). *Id.*, section 1.f.

implement new or significantly expanded programs (e.g., water recycling) to comply with these effluent limitations. The new interpretation of the biostimulatory substances water quality objective is explained in the *Memo on Numerical Translation of Narrative Objective*. The more stringent effluent limitations will require a 40 percent reduction in the total inorganic nitrogen loads discharged to San Francisco Bay and its tributaries compared to 2022 levels. Therefore, it is infeasible for Dischargers to meet these limitations immediately. Except for minor facilities (explained below), significant treatment upgrades will be needed to reduce nutrient discharges. Thus, this Order establishes compliance schedules as authorized by the Compliance Schedule Policy.

Compliance schedules under the Compliance Schedule Policy must require compliance as soon as possible and may not exceed ten years. The Water Board is thus prohibited from granting a compliance schedule in a permit that is longer than ten years. In this case, ten-year schedules are needed to develop the most effective strategy (e.g., water recycling, nature-based solutions, treatment upgrades) to comply with the total inorganic nitrogen WQBELs. As explained below through representative examples, a compliance schedule of 10 years is necessary for all dischargers.

All Dischargers except the three minor Dischargers discussed below (i.e., those with total inorganic nitrogen WQBELs based on an effluent concentration of 20.5 mg/L) must implement significant treatment plant upgrades and the projects needed to comply will involve planning, design, and construction. The planning and design phases typically include many steps such as evaluating options to improve treatment; developing preliminary designs, 10 percent designs, 50 percent designs, 90 percent designs, and final designs; and completing contract documents so the projects can be publicly bid and awarded to contractors. The Dischargers must also obtain permits from multiple agencies, which can take several months or longer. The construction phase generally takes several years. Additional time will also be needed for treatment unit startup, optimization, and troubleshooting.

Some Dischargers have begun the planning phase, and their proposed projects will take an anticipated 10 years. For example, Delta Diablo is planning to reduce its effluent nitrogen concentration to around 15 to 20 mg/L. This project will undergo two phases, where the first phase addresses current infrastructure upgrades needed at the facility, and the second phase increases aeration capacity to remove nitrogen. According to its preliminary schedule for phase one, it needs six months for planning, 18 months for design and bidding, four years for construction, and one year for startup. During the construction for phase one, phase two planning will take six months, 18 months for design, four years for construction, one year for startup, and one year for optimization. The total timeline for these projects is just over ten years.

The three minor Dischargers also need 10 years to comply. This is because these facilities will need to develop, plan, and implement actions to improve the performance of their facilities to accommodate population growth in their service areas and meet their final effluent limitations. In addition, they may need to consider trading options with larger facilities implementing more significant treatment plant upgrades. Trading with larger facilities may result in a more cost-effective regionwide strategy to ensure beneficial uses are protected. A trading program does not yet exist and will take time to develop, especially considering that no trading program has been developed in this Region or approved by the Water Board. As described in Provision 6.3.4, the trading program must be consistent with U.S. EPA guidance. The Regional Water Board intends to consider a formal trading program with the next permit reissuance. Since the final aggregate load WQBEL becomes effective in 10 years, a compliance schedule that aligns with this aggregate load WQBEL is necessary for minor dischargers to reap the potential benefits of trading.

Based on the above information, this Order grants until October 1, 2034, for Dischargers to begin complying with the final effluent limits. This represents a time schedule of 10 years, which is the maximum allowed by the Compliance Schedule Policy.

The Dischargers submitted the following documentation to qualify for compliance schedules:

- **Descriptions of diligent efforts the Dischargers have made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.** The Dischargers provided total inorganic nitrogen monitoring data for the previous order term. The primary source of total inorganic nitrogen in the discharges is human waste.
- **Descriptions of source control and/or pollutant minimization efforts currently underway or completed.** The Dischargers implement pollution prevention programs in accordance with their individual permits, and those with influent flows above five million gallons per day implement pretreatment programs that regulate industrial discharges. The primary source of total inorganic nitrogen in municipal wastewater is human waste; therefore, Dischargers do not have a practical way of controlling influent levels.
- **Proposed schedules for additional or future source control measures, pollutant minimization, or waste treatment.** Because the primary source of total inorganic nitrogen in municipal wastewater is human waste, additional source control and pollution minimization is infeasible. Provisions 6.3.3 and 6.3.4 of the Order require the Dischargers to submit strategies to comply with the final effluent limitations in Table 4 of the Order, including

specific projects to reduce total inorganic nitrogen loads discharged to San Francisco Bay.

- **Data demonstrating current treatment facility performance to compare against limitations.** The Dischargers provided total inorganic nitrogen monitoring data. These data were used to determine that Dischargers would be unable to meet the final effluent limitations immediately. They were also used to establish the performance-based interim effluent limitations in Table 3 of the Order as described in Fact Sheet section 4.2.2 below.
- **Highest discharge quality that can reasonably be achieved until final compliance is attained.** Compliance with the interim effluent limitations will ensure that each Discharger maintains its discharge at the highest levels that can reasonably be achieved until compliance with the final effluent limitations are attained. The Regional Water Board will reconsider the interim effluent limitations during the permit reissuance scheduled for 2029.
- **Demonstration that proposed schedules are as short as practicable.** The Dischargers provided planned construction schedules for treatment plant upgrades that are being undertaken to reduce total inorganic nitrogen discharges. As explained above, a ten-year compliance schedule is as short as practicable because of the time needed to plan, design, fund, permit, construct, and optimize treatment plant upgrades regionwide.

Provision 6.3.3 of the Order includes interim requirements and dates for their achievement. The interim dates are no more than one year apart. The Order requires the Dischargers to notify the Regional Water Board, in writing, no later than 14 days following each interim date, of their compliance or noncompliance with the interim requirements due on that date. Because the compliance schedules exceed one year, the Order establishes interim numeric limitations as described below.

The benefit of the compliance schedule provided in this Order is that Dischargers do not have to immediately comply with the final WQBELs while they undertake the considerable and costly actions necessary to ultimately achieve compliance by the end of the compliance schedule in ten years. For the term of this permit, this Order requires compliance with existing performance-based interim effluent limitations and other actions to put Dischargers on a path toward compliance.

4.2.2. Interim Effluent Limitations

Because the compliance schedules extend beyond one year, the Compliance Schedule Policy requires that this Order include interim effluent limitations based on current treatment performance or existing permit limitations, whichever are more stringent. The interim effluent limitations in this Order are

designed to cap total inorganic nitrogen loads at existing treatment levels. A period from 2013 through 2022 was chosen to represent current treatment capabilities, to account for variability, and to provide sufficient data for statistical analysis. Total inorganic nitrogen loads were calculated using data from days when both total ammonia and nitrate-nitrite were sampled. The sum is the total inorganic nitrogen discharged for a given day. To calculate the interim effluent limitation for each Discharger, the 95th percentile of each Discharger's total inorganic nitrogen loads from May 1 through September 30 of 2013 through 2022 were used, assuming a lognormal distribution. The resulting interim effluent limitations are listed in Table 3 of the Order. Compliance with the interim limits is based on a five-month average of daily total inorganic nitrogen loads from May through September of each year.

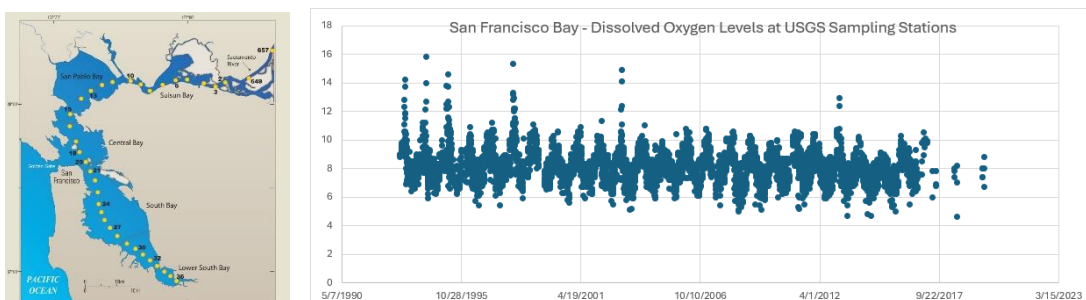
4.3. Discharge Requirement Considerations

- 4.3.1. **Anti-Backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4), and 40 C.F.R. section 122.44(l), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous order. The effluent limitations in this Order are new and are more stringent than those in the previous order.
- 4.3.2. **Antidegradation.** This Order complies with the antidegradation provisions of 40 C.F.R. section 131.12 (federal policy) and State Water Board Resolution 68-16 (state policy). Permitted discharges must be consistent with these policies. This Order does not decrease the quality nor increase the quantity of the Dischargers' nutrient discharges to San Francisco Bay and its tributaries. The Dischargers' discharges into San Francisco Bay are authorized by the individual NPDES permits listed in Attachment B. This Order does not authorize any additional discharges, but rather requires the amount of nitrogen authorized by these existing permits to be reduced. The performance-based interim limits ensure that the Dischargers will maintain existing performance and do not authorize increased nitrogen discharges, temporary or otherwise.

This Order complies with the antidegradation requirements of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16, as well as the State Water Resources Control Board's Administrative Procedures Update, Antidegradation Policy Implementation for NPDES Permitting, 90 004 (APU 90-004). As explained below, this Order will not degrade San Francisco Bay water quality with respect to biostimulatory substances, including in the Lower South Bay. Instead, this Order will restore water quality to the typically high levels observed for many years and protect existing beneficial uses. For purposes of the antidegradation policies, the baseline water quality is the best water quality that has existed since 1968 (state policy) or 1975 (federal policy) unless some degradation has been authorized. No degradation for biostimulatory substances has been authorized since 1968 or 1975; therefore, the baseline for comparison

with the biostimulatory water quality objective is the best water quality since then.

Prior to passage of the Clean Water Act in 1972, San Francisco Bay water quality was often poor. Pollutant discharges from many sources, including sewage systems, contributed to eutrophication, foul smells, and low dissolved oxygen. San Francisco Bay south of the Dumbarton Bridge had alarmingly low dissolved oxygen concentrations due to excessive algal growths caused by biostimulatory substances in wastewater and the discharge of high oxygen-demanding substances (Interim Water Quality Control Plan, San Francisco Bay, Basin 2, June 1971). Water quality related to biostimulatory substances greatly improved during the 1970s and 1980s as secondary treatment was installed to remove biochemical oxygen demand from municipal wastewater.¹² These improvements have been consistently maintained since then.¹³ For example, dissolved oxygen concentrations have remained relatively constant and protective of beneficial uses, as demonstrated by U.S. Geological Survey data collected along the “spine” of the bay shown in the figure below on the right. The figure on the left below shows the numbered station locations where the data are collected during every cruise. Since 1993, the U.S. Geological Survey has conducted monthly cruises along the entire Bay-Delta system as part of the Regional Monitoring Program for Water Quality in San Francisco Bay



Dissolved oxygen is a good proxy for the effects of biostimulatory substances on beneficial uses. When biostimulatory substances (i.e., nutrients) feed an algal bloom, the subsequent consumption of dissolved oxygen leads to low dissolved oxygen levels that can harm beneficial uses. Although dissolved oxygen levels throughout the bay have remained consistently high, occasional algal blooms have periodically occurred, including some toxic algal blooms. However, these algal blooms rarely lasted long enough or spread far enough to cause nuisance or adversely affect beneficial uses throughout San Francisco Bay. While sufficient nutrients have been present in San Francisco Bay to

¹² SFEI, 2007. The Pulse of the Estuary: Monitoring and Managing Water Quality in the San Francisco Estuary. SFEI Contribution No. 532.

¹³ The exception is dissolved oxygen in Guadalupe and Alviso sloughs due to dischargers from former salt ponds in the Lower South Bay.

support large algal blooms, the risk of significant algal blooms and their adverse effects to beneficial uses has been minimized by the many other factors that together diminish the potential for algal blooms. These factors include turbidity, light penetration, clam foraging, temperature, and wave and tidal action that disrupt algal growth near the water surface.

Recently, however, as demonstrated by the large algal bloom in 2022 that led to massive fish kills (and the significant but less harmful bloom in 2023), the probability that a significant algal bloom is triggered appears to have increased during the dry season. Nutrients loading has not significantly changed recently, but it appears the other factors that affect the bay's resiliency against significant algal blooms have. The increase in probability, coupled with sufficient nutrient loading to support potentially large blooms, means that the risk posed by algal blooms has also increased. This Order requires nutrient reductions to reduce this risk to a level comparable to the past (as described above). Because the factors that affect the probability of algal blooms are uncontrollable, this Order seeks to reduce the risk, not by reducing the probability of algal blooms, but by reducing their consequences. For example, since nutrients contribute to the magnitude of an algal bloom by fueling algal growth, reducing nutrients will limit the effects of a bloom event. Reduced nutrient loads are expected to offset the increased probability of large algal blooms.

The baseline water quality (the highest water quality since 1968 and 1975) met the narrative biostimulatory water quality objective. In 2022 and 2023, however, nutrients in the Bay fed algal blooms to the extent that they adversely affected beneficial uses and caused nuisance conditions. Where the baseline water quality is equal to or less than the applicable water quality objective, antidegradation policies require water quality to be maintained or improved. As explained above and elsewhere in this Order, this Order will improve water quality by requiring a significant reduction in the discharge of nitrogen to meet the narrative biostimulatory water quality objective and maintain and protect beneficial uses. Since this Order will not lower existing or baseline water quality, under APU 90-004 no further antidegradation analysis and no findings authorizing degradation are required.

- 4.3.3 **Stringency of Requirements.** This Order contains effluent limitations for total inorganic nitrogen that are no more stringent than required to implement CWA requirements. The total inorganic nitrogen effluent limitations are necessary to meet the Basin Plan's biostimulatory substances water quality objective. That objective has been approved pursuant to federal law and is an applicable federal water quality standard because U.S. EPA approved the objective prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1).

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations for the biostimulatory substances water quality objective that are applicable to the Dischargers are established in the individual NPDES permits listed in Attachment B. This Order overlays nitrogen mass load reduction effluent limitations on the Dischargers that represent nitrogen reductions necessary to protect beneficial uses under limited duration, critical condition algal blooms. This Order recognizes that immediate compliance with the final effluent limitations to meet the biostimulatory substances water quality objective is impossible. Rather, it will take time, significant actions, and expenditures to comply. This Order provides a path and compliance schedules for Dischargers to comply with the biostimulatory substances water quality objective. As such, compliance with the conditions of this Order constitutes compliance with the receiving water limitations for biostimulatory substances for discharges of nitrogen.

This Order does not create new receiving water limitations. Specifically, the use of a dissolved oxygen threshold of 4.0 mg/L was an analytic step for purposes of translating the narrative biostimulatory water quality objective into numeric effluent limitations. The use of this dissolved oxygen value does not establish new receiving water limitations or promulgate any new, or amend existing, water quality objectives.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

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

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. Attachment G of each individual NPDES permit contains sampling and reporting requirements and additional standard provisions that supplement the federal standard provisions in Attachment D.

Attachment D of each individual NPDES permit omits the federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State's enforcement authority under the Water Code is more stringent. In lieu of these conditions, the individual NPDES permits incorporate Water Code section 13387(e) by reference.

6.2. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more information, see Fact Sheet section 7. Consistent with the previous order, this Order requires influent monitoring for Dischargers with a design flow greater than or equal to 10 MGD for total ammonia, total Kjeldahl nitrogen, nitrate-nitrite, and total phosphorus; and effluent monitoring for all Dischargers for total ammonia, nitrate-nitrite, and total phosphorus. This Order requires influent monitoring for total Kjeldahl nitrogen (organic nitrogen plus ammonia) because untreated wastewater often contains high levels of organic nitrogen. It does not require effluent monitoring for total Kjeldahl nitrogen because treated wastewater contains very little organic nitrogen (about five percent of total nitrogen), and the remaining organic nitrogen in treated wastewater isn't as bioavailable.

6.3. Special Provisions

6.3.1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.44(d)(1)(vi)(C), 122.62, and 122.63, and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

6.3.2. Monitoring, Modeling, and Subembayment Studies

This Order requires the Dischargers to conduct, by themselves or in collaboration with others, studies to address the potential impacts of nutrients on San Francisco Bay beneficial uses. These studies must be supported by receiving water monitoring and modeling efforts of San Francisco Bay as a whole to understand how the entire Bay assimilates nutrients and more specific studies to better understand how subembayments respond. There are efficiencies from collaborating on large-scale studies and studies led by individual dischargers when done in collaboration with the Nutrient Management Strategy Steering Committee. BACWA has identified \$2.2 million per year for five years for collective efforts, and the Regional Water Board finds this amount to be an appropriate level of funding to support further receiving water monitoring and science plan development and implementation as described in this provision. BACWA has identified that at least \$200,000 from its yearly support should be directed toward project management. To communicate findings from the science program, one of the project management deliverables will be to develop an annual report that summarizes the findings from the

monitoring, modelling, and studies and a breakdown of how the funds were spent that year. If the Dischargers and BACWA are successful in securing additional resources, such as from grants or other agencies, for nutrient monitoring or studies identified in the science plan, the additional funding will not count toward the Dischargers' level of effort under this provision.

These studies and analyses are necessary to continue to understand San Francisco Bay's interaction with nutrients and how these interactions can lead to harmful algal blooms. Support for receiving water monitoring will provide necessary data to further model San Francisco Bay nutrient loads, determine San Francisco Bay's response to nutrient loads, and inform the development and implementation of strategies to manage these nutrient loads. While total inorganic nitrogen has been identified as the limiting nutrient in San Francisco Bay, studies also need to track phosphorus levels and evaluate if phosphorus could seasonally limit algal growth in certain portions of San Francisco Bay.

These studies will be developed by the Nutrient Management Strategy Steering Committee and stakeholders, including the Dischargers, U.S. EPA, and San Francisco Baykeeper. This collaborative process will ensure that the Nutrient Science Plan is updated to ensure science-based decision making.

CWA section 1318(a) and Water Code section 13383 authorize this provision. CWA section 1318(a) authorizes the collection of information necessary to carry out the CWA's objectives, including but not limited to developing or assisting in the development of any effluent limitation, other limitation, prohibition, effluent standard, pretreatment standard, or standard of performance. Water Code section 13383 authorizes the Regional Water Board to establish monitoring, reporting, and recordkeeping requirements for NPDES dischargers. It also authorizes the Regional Water Board to require NPDES dischargers to provide other information as may be reasonably required.

6.3.3. Compliance Schedule and Reporting

The requirement to submit reports on measures each Discharger will implement to ensure compliance with the final WQBELs for total inorganic nitrogen is based on the Compliance Schedule Policy.

6.3.4. Regional Planning to Reduce Total Inorganic Nitrogen Loads

This Order requires major Dischargers to, by themselves or in collaboration with others, provide information on plans to meet the final effluent limitations in Table 4 of the Order, and evaluate the potential for nature-based systems (e.g., wetlands) and water recycling to further reduce nutrient loads to San Francisco Bay. This is necessary to encourage regional coordination so compliance with the final effluent limitations will occur as soon as possible as required by the Compliance Schedule Policy. This provision is also necessary to plan for multi-benefit options to achieve 50 and 60 percent load reductions from 2022 (60 and

68 percent from the 2019 baseline) if the next permit reissuance scheduled for 2029 finds them necessary.

As part of their regional coordination strategy, Dischargers may propose a formal nutrient trading or offset program to achieve final effluent limits for total inorganic nitrogen. If a discharger seeks to achieve compliance with final effluent limits by purchasing credits from another discharger, the Regional Planning report may propose a framework for nutrient trading to facilitate compliance with the final individual and aggregate effluent limits established in Table 4. While this Order establishes a baywide aggregate mass limit, the Dischargers may propose a baywide and subembayment trading program. As described in Fact Sheet section 6.3.2, there will be advances in our scientific understanding of how San Francisco Bay assimilates nutrient loads over this permit term.

CWA section 1318(a) and Water Code section 13383 authorize this provision. CWA section 1318(a) authorizes the collection of information necessary to carry out the CWA's objectives, including but not limited to developing or assisting in the development of any effluent limitation, other limitation, prohibition, effluent standard, pretreatment standard, or standard of performance. Water Code section 13383 authorizes the Regional Water Board to establish monitoring, reporting, and recordkeeping requirements for NPDES dischargers. It also authorizes the Regional Water Board to require NPDES dischargers to provide other information as may be reasonably required.

6.3.5. Multi-Benefit Solutions for Load Reductions

Multi-benefit projects will take longer to complete than conventional projects due to additional challenges associated with interagency agreements, multi-agency permitting, and land acquisition. This provision requires Dischargers that identify long-term multi-benefit solutions (i.e., water recycling or nature-based solutions) that cannot be completed by the compliance date (October 1, 2034) for the final effluent limitations to identify such projects and their intent to pursue them. The Regional Water Board encourages Dischargers to pursue these long-term strategies when feasible because they are likely to result in a greater benefit to the community and the environment relative to treatment plant improvements alone. The Regional Water Board will consider available regulatory mechanisms to provide Dischargers that identify multi-benefit projects likely to result in total inorganic nitrogen loads at or below the final WQBELs more time to comply. Available regulatory mechanisms may include, for example, amending the Basin Plan to include a water quality attainment strategy for biostimulatory substances; finding that a new compliance schedule under the Compliance Schedule Policy is justified based on new, revised, or newly interpreted water quality objectives; or imposing a time schedule under a time schedule order or cease and desist order.

Examples of multi-benefit solutions include three projects the Central Contra Costa Sanitary District has identified: (1) the Refinery Recycled Water Exchange Project would replace raw Delta water used at two Martinez refineries (PBF and Marathon), (2) the Potable Reuse Project would supplement water supplies for the East Bay Municipal Utility District, and (3) the Raw Wastewater Diversion with Dublin San Ramon Services District would produce recycled water to meet irrigation demand. These projects would provide multiple benefits and could significantly reduce Central Contra Costa Sanitary District's total inorganic nitrogen loads to San Francisco Bay. However, all three projects would require agreements among multiple agencies and will likely take longer than 10 years to implement. To move them forward, Central Contra Costa Sanitary District has identified milestones that it can report on annually over the next five years to determine each project's feasibility and, if feasible, an implementation schedule.

Another example of a multi-benefit solution is the Pure Water Peninsula project. This collaborative is made up of Silicon Valley Clean Water, the San Francisco Public Utilities Commission, the City of San Mateo, the Bay Area Water Supply and Conservation Agency, California Water Service, and the City of Redwood City, who together are developing a regional potable reuse project. The Pure Water Peninsula project would provide purified water to resolve multiple water supply and wastewater issues, while realizing the benefits of shared infrastructure, asset recovery, economies of scale, and a relatively competitive funding strategy. Source water for this potable reuse project would be recycled water from Silicon Valley Clean Water and the City of San Mateo, diverting 8.0 MGD from each facility. The current schedule projects a starting date for water delivery of 2039. The long timeline is associated with the number of agreements that need to be developed among the project partners, the need to complete CEQA and permitting efforts, and the time necessary to implement multiple construction packages. Silicon Valley Clean Water will report on the project milestones as the Pure Water Peninsula project progresses.

Water Code section 13383 authorizes the Regional Water Board to establish monitoring, reporting, and recordkeeping requirements for NPDES dischargers. It also authorizes the Regional Water Board to require NPDES dischargers to provide other information as may be reasonably required.

6.3.6. Recognition of Early Actors

The previous order encouraged Dischargers to make early investments in nutrient reductions in the absence of nutrient load limitations. Fact Sheet section II.E of the previous order identified several Dischargers that planned to take early actions to reduce total inorganic nitrogen loads to San Francisco Bay. Once complete, these projects were expected to result in effluent total inorganic nitrogen concentrations below 20 mg/L. Because of these investments, nutrient

loads from these Dischargers to San Francisco Bay will be realized well before those of other Dischargers that have yet to undertake such investments.

This provision requires Dischargers that have already completed or begun construction or implementation of their projects by the effective date of this Order and that seek to be recognized as early actors to provide updates with each Annual Nutrients Report required by MRP section 5.2.2. Because early actions to reduce total inorganic nitrogen loads to San Francisco Bay will make excessive algae blooms less likely sooner, the Regional Water Board will consider available regulatory mechanisms to provide any such Dischargers that are unable to comply with final WQBELs upon completion of their projects more time to comply.

6.3.7. Report of Waste Discharge

40 C.F.R section 122.21 requires publicly owned treatment works with a currently effective permit to submit a new application (report of waste discharge) at least 180 days before the expiration of the existing permit. Under 40 C.F.R. section 122.6 and title 23, California Code of Regulations, section 2335.4, if a discharger submits a timely and complete report of waste discharge for permit reissuance and the Regional Water Board does not reissue the permit before the expiration date, the expired permit continues in force and effect until the effective date of the reissued permit.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The following provides the rationale for the monitoring and reporting requirements in the MRP.

7.1. Monitoring Requirements Rationale

7.1.1. Influent Monitoring. Influent monitoring is necessary to understand nutrient speciation entering treatment plants, optimize nutrient removal efficiencies, inform treatment plant upgrade designs, and evaluate trends.

7.1.2. Effluent Monitoring. Effluent monitoring is necessary to understand Facility operations, evaluate compliance with this Order's effluent limitations, and determine trends as treatment plant improvements are made over this permit term.

8. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for point source discharges of nutrients from the Dischargers' facilities. As a step in the WDR adoption process, Regional Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

8.1. Notification of Interested Parties. The Regional Water Board notified the Dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. The public had access to the agenda and any changes in dates and locations through the [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) (waterboards.ca.gov/sanfranciscobay).

Consistent with Water Code section 189.7, the Regional Water Board notified potentially affected disadvantaged communities and tribal communities of this Order and provided them with an opportunity to engage prior to the public comment period. As part of the outreach effort, the Regional Water Board held a workshop to engage with interested disadvantaged communities and tribal communities on March 5, 2024. The Regional Water Board also notified disadvantaged communities and tribal communities of the opportunity to submit written comments during the public comment period.

8.2. Environmental Justice. Water Code section 13149.2 requires the Regional Water Board to make a concise programmatic finding on potential environmental justice, tribal impact, and racial equity considerations for reissued regional WDRs. The Regional Water Board has considered readily available information concerning anticipated water quality impacts in disadvantaged communities and tribal communities that may result from the changes to the permit requirements in this Order. The Regional Water Board has also considered the environmental justice concerns within its authority raised regarding those impacts.

The Discharges authorized by this Order will occur across the San Francisco Bay region. There are disadvantaged communities¹⁴ and tribal communities¹⁵ in the region. This Order imposes numeric effluent limitations for total inorganic nitrogen to reduce 2022 dry-season nitrogen loads to San Francisco Bay by 40 percent and provides a 10-year compliance schedule for Dischargers to meet final effluent limits. The reduction in nitrogen loads will reduce the risk of large algal blooms and protect the beneficial uses of waters across the San Francisco Bay region. These changes to permit requirements will improve water quality in disadvantaged communities and tribal communities and the region overall.

¹⁴ Water Code section 13149.2, subdivision (f)(1), defines "disadvantaged community" as "a community in which the median household income is less than 80 percent of the statewide annual median household income level." The statewide annual median household income in the U.S. Census Bureau 2020 Census was \$78,672.6. Based on this data, a community with a household income less than \$62,938 is a "disadvantaged community" as used in section 13149.2.

¹⁵ Water Code section 13149.2, subdivision (f)(3), defines "tribal community" as "a community within a federally recognized California Native American tribe or nonfederally recognized Native American tribe on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004."

Dischargers raised concerns about the impact compliance costs will have on disadvantaged communities. Although the cost concerns are beyond the scope of Water Code section 13149.2, the Regional Water Board has considered these concerns. The Regional Water Board recognizes the costs to implement the Order may have a greater impact on disadvantaged communities; however, not implementing the Order could result in detrimental impacts to water quality in disadvantaged communities and the region overall. Harmful algal blooms negatively affect many beneficial uses, such as water contact and non-contact recreation; fishing; shellfish harvesting; cold and warm freshwater, marine, and estuarine habitats; and preservation of rare and endangered species. Poor water quality can also lead to increased health care costs. Harmful algal bloom toxins can cause human illness through direct contact, airborne transmission, and fish and shellfish poisoning. (See also finding 2.2 of the Order.)

- 8.3. Written Comments.** Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were to be submitted either in person, by e-mail, or by mail to the Executive Office at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Robert Schlipf.

Written comments were due at the Regional Water Board office by 5:00 p.m. on May 6, 2024.

- 8.4. Public Hearing.** The Regional Water Board held a public hearing on the tentative Order during its meeting at the following date and time:

Date: July 10, 2024
Time: 9:00 a.m.

Contact: Robert Schlipf, (510) 622-2478, robert.schlipf@waterboards.ca.gov.

Interested persons were provided notice of the hearing and information on how to participate. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge and Order.

Dates and venues can change. The [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) is (waterboards.ca.gov/sanfranciscobay), where one can access the current agenda for changes.

- 8.5. Reconsideration of Waste Discharge Requirements.** Any person aggrieved by this Regional Water Board action may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050. The State Water Board must receive the petition at the following address within 30 calendar days of the date of Regional Water Board action:

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

A petition may also be filed by email at waterqualitypetitions@waterboards.ca.gov.

For instructions on how to file a water quality petition for review, see the [Water Board's petition instructions](https://waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) (waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml).

- 8.6. Information and Copying.** Supporting documents and comments received are on file. To review these documents, please contact Melinda Wong, the Regional Water Board's custodian of records, by calling (510) 622-2300 or emailing Melinda.Wong@waterboards.ca.gov. Document copying may be arranged.
- 8.7. Register of Interested Persons.** Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the Facility, and provide a name, address, and phone number.
- 8.8. Additional Information.** Requests for additional information or questions regarding this Order should be directed to Robert Schlipf, (510) 622-2478, robert.schlipf@waterboards.ca.gov.