CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0079111
TENTATIVE ORDER R5-2026-XXXX

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF SACRAMENTO COMBINED WASTEWATER COLLECTION AND TREATMENT SYSTEM SACRAMENTO COUNTY

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

Table 1. Discharger Information

Discharger:	City of Sacramento
Name of Facility:	Combined Wastewater Collection and Treatment System
Facility Street Address:	1395 35th Avenue
Facility City, State, Zip:	Sacramento, CA 95822
Facility County:	Sacramento County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
002	Combined Municipal and Industrial Wastewater and Stormwater	38° 31’ 09”	121° 31’ 26”	Sacramento River
003	Combined Municipal and Industrial Wastewater and Stormwater	38° 31’ 23”	121° 31’ 25”	Sacramento River
004	Combined Municipal and Industrial Wastewater and Stormwater	38° 32’ 52”	121° 30’ 37”	Sacramento River
005	Combined Municipal and Industrial Wastewater and Stormwater	38° 32’ 51”	121° 30’ 37”	Sacramento River
006	Combined Municipal and Industrial Wastewater and Stormwater	38° 34’ 18”	121° 30’ 48”	Sacramento River
007	Combined Municipal and Industrial Wastewater and Stormwater	38° 34’ 19”	121° 30’ 47”	Sacramento River

Table 3. Administrative Information

This Order was Adopted on:	**XX February 2026**
This Order shall become effective on:	**1 April 2026**
This Order shall expire on:	**31 March 2031**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a NPDES permit no later than:	**31 March 2030**
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	**Major Discharge**

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **XX February 2026**.

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PATRICK PULUPA, Executive Officer

WASTE DISCHARGE REQUIREMENTS
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TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the City of Sacramento (Discharger) Combined Wastewater Collection and Treatment System (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Legal Authorities. This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

On 11 April 1994, USEPA adopted the Combined Sewer Overflow (CSO) Control Policy (59 FR 18688-18698). The CSO Control Policy was incorporated into the federal CWA by the Wet Weather Water Quality Act of 2000 [House Resolution(H.R.) 828) which is part of H.R. 4577, an omnibus funding bill. The CWA at Section 402(q)(1) now states: " ...Each permit ...pursuant to this Act ...for a discharge from a municipal combined storm and sanitary sewer shall conform to the CSO Control Policy..." The CSO Control Policy establishes a consistent national approach for controlling discharges from CSOs to the nation's water through the NPDES permit program. CSOs are defined as the discharge from the combined sewer system at a point prior to the publicly owned treatment works (POTW) treatment plant (see Federal Register, Vol. 59 No. 75, Tuesday, 19April1994, Section LA.). The City's combined sewer system (CSS), including Pioneer Reservoir and the Combined Wastewater Treatment Plant (CWTP), is not a POTW and is not subject to requirements that apply only to POTWs. This Order implements the USEPA CSO Control Policy.

B. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (Pub. Res Code, § 21100 et seq.).

C. Background and Rationale for Requirements. The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through G are also incorporated into this Order.

D. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections **III.C, IV.B, IV.C, and V.B** are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

E. **Monitoring and Reporting.** 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Order and the Monitoring and Reporting Program, provided in Attachment E, establish monitoring and reporting requirements to implement federal and State requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for these reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is responsible for these requirements, which are necessary to determine compliance with this Order. The need for these requirements is further discussed in the Fact Sheet, Attachment F.

F. **Notification of Interested Persons.** The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

G. **Consideration of Public Comment.** The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order R5-2020-0039 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 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 Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II.B, in a manner different from that described in this Order is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D). This Discharge Prohibition does not apply to discharges from Discharge Points 002, 003, 004, 005, 006, and 007 in accordance with Discharge Prohibitions III.D and III.E below.

C. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. Discharge of waste classified as 'hazardous', as defined in the CCR, title 22, section 66261.1 et seq., is prohibited.

E. The discharge to the Sacramento River is prohibited at the following discharge points unless the following specified conditions are met, or authorization has been granted. The Discharger must obtain prior written approval from the Executive Officer to discharge from the CWTP, Pioneer Reservoir, or the combined sewer system (CSS) for maintenance or equipment testing, when the discharges would not be required by wet weather conditions:

1. **Sump 2 Bypass (Discharge Points 004 and 005), and Sump 1A Bypass (Discharge Point 007).** The treatment capacity of the Pioneer Reservoir (250 MGD) and the treatment capacity of the Combined Wastewater Treatment Plant (CWTP) (130 MGD) must be reached prior to discharge.

2. **Pioneer Reservoir (Discharge Point 006).** No discharge in excess of 250 million gallons per day (MGD) unless available storage at the CWTP has been maximized.

F. Unless approved by the Executive Officer, discharges from Discharge Points 002,003, 004, 005, 006, and/or 007 to surface waters or surface water drainage courses is prohibited during non-storm events. The Discharger must obtain written approval from the Executive Officer to discharge from the CSS, including the CWTP and Pioneer Reservoir, for maintenance or equipment testing, when the discharges would not be required by wet weather conditions.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 002 (CWTP), 003 (CWTP-Sump 104), and 006 (Pioneer Reservoir)

1. Final Effluent Limitations – Discharge Point Discharge Points 002, 003, and 006

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 002, 003, and 006. Unless otherwise specified compliance shall be measured at Monitoring Location EFF-002, EFF-003, and EFF-006, as described in the Monitoring and Reporting Program, Attachment E:

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Effluent Limitations

Parameters	Units	Storm Year Average	Maximum Daily
Total Suspended Solids (TSS)	Milligrams per liter (mg/L)	100	--
Settleable Solids	Milliliters per liter (ml/L)	--	1.0
Chlorine, Total Residual	mg/L	--	0.019

Table 4 Notes:

1. **Storm Year Average.** A storm year is defined as 1 October through 30 September of the following year.
2. **Total Suspended Solids.** In addition to storm year average effluent limit, two consecutive samples shall not exceed 150 mg/L.
3. **Total Suspended Solids and Settleable Solids.** Effluent limits are applicable to Discharge Point 006 (Pioneer Reservoir) for flows of 250 MGD or less and for all flows from Discharge Points 002 and 003.

b. **pH:**

i. 6.0 Standard Units (SU) as an instantaneous minimum.

ii. 8.5 SU as an instantaneous maximum.

c. **Percent Removal.** The Discharger shall eliminate or capture for treatment at least 85 percent, by volume, of the combined sewage collected in the CSS during precipitation events (days with at least 0.1" of rainfall in previous 24 hour period) on a system-wide annual average basis. Combined sewage captured for treatment shall receive, at a minimum, primary clarification or equivalent, solids and floatable disposal, and disinfection at the CWTP, Pioneer Reservoir, and/or Sacramento Area Sewer District (SacSewer) EchoWater Resource Recovery Facility (EchoWater Facility).

d. **Temperature.** The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20° Fahrenheit (°F).

e. **Fecal Coliform Organisms.** Effluent fecal coliform organisms shall not exceed:

i. 1,000 most probable number per 100 milliliters (MPN/100 mL) in any three consecutive samples, and

ii. 200 MPN/100mL, as a storm year median (1 October through 30 September).

f. **Diazinon and Chlorpyrifos.** Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:

i. Average Monthly Effluent Limitation (AMEL)

SAMEL = CD M-avg/0.079 + CC M-avg/0.012 ≤ 1.0

CD M-AVG = average monthly diazinon effluent concentration in µg/L.

CC M-AVG = average monthly chlorpyrifos effluent concentration in µg/L

ii. Maximum Daily Effluent Limitation (MDEL)

SMDEL = CD D-max/0.14 + CC D-max/0.021 ≤ 1.0

CD D-max = maximum daily diazinon effluent concentration in µg/L.

CC D-max = maximum daily chlorpyrifos effluent concentration in µg/L.

g. **Methylmercury.** Effective 31 December 2030, for a calendar year, the total combined methylmercury loading from Discharge Points 002, 003, and 006 shall not exceed 0.53 grams, in accordance with the Delta Mercury Control Program.

h. **Electrical Conductivity (EC).** The monthly average effluent electrical conductivity shall not exceed 700 micromhos per centimeter (µmhos/cm).

2. Interim Effluent Limitations

a. **Mercury, Total.** Effective immediately, and until 31 December 2030, the storm-year total mercury loading from Discharge Points 002, 003, and 006 shall not exceed 341 grams. This interim effluent limitation shall apply in lieu of the final effluent limits for methylmercury (Section IV.A.1.g).

B. Land Discharge Specifications – NOT APPLICABLE

C. Recycling Specifications – NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. Toxicity - Pursuant to Water Code section 13263 and the Basin Plan, the discharge shall not cause the Sacramento River to exceed the following toxicity water quality objectives:

a. Toxic substances shall not be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

b. **Acute Toxicity.** The acute aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.80, where the following null hypothesis, Ho, shall be used:

Ho: Mean response (ambient water) ≤ 0.80 • mean response (control)

And where the following alternative hypothesis, Ha, shall be used:

Ha: Mean response (ambient water) > 0.80 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting acute aquatic toxicity testing and rejecting this null hypothesis in accordance with the TST statistical approach. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the acute aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the acute aquatic toxicity water quality objective.

c. **Chronic Toxicity.** The chronic aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.75, where the following null hypothesis, Ho, shall be used:

Ho: Mean response (ambient water) ≤ 0.75 • mean response (control)

And where the following alternative hypothesis, Ha, shall be used:

Ha: Mean response (ambient water) > 0.75 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing and rejecting this null hypothesis in accordance with the Test of Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the chronic aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the chronic aquatic toxicity water quality objective.

B. Groundwater Limitations – NOT APPLICABLE

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.

2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, division 3, chapter 26.

b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   i. violation of any term or condition contained in this Order;

   ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

   iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

   iv. a material change in the character, location, or volume of discharge.

   The causes for modification include:

   i. New regulations. New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

   ii. Land application plans. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

   iii. Change in sludge use or disposal practice. Under 40 CFR section 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

   The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

   ii. Controls any pollutant limited in the Order.

   The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by U.S. EPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system. The CSS is not a POTW, therefore this section is not applicable.

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Safeguard to electric power failure:

   i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

   ii. Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency,

duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A.2.i of this Order.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

k. A publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet weather flows and total annual flows, as

appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Central Valley Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Central Valley Water Board may extend the time for submitting the report. The CSS is not a POTW, therefore this section is not applicable.

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

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

n. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

o. This Order may be reopened to transfer ownership of control of this Order. The succeeding owner or operator must apply in writing requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order.

p. If the Discharger submits a timely and complete ROWD for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

q. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

r. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or effluent limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

a. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including, but not limited to:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

c. **Mercury.** The Basin Plan's Delta Mercury Control Program was designed to proceed in two phases. The Delta Mercury Control Program is in Phase 2, and the Central Valley Water Board is conducting a Phase 1 Delta Mercury Control Program Review that considers modification to the Delta Mercury Control Program. This Order may be reopened to address changes to the Delta Mercury Control Program.

d. **Compliance with Statewide Sanitary Sewer System General Order..** The Facility is not currently subject to Order No. 2022-0103-DWQ, a Statewide General WDR for Sanitary Sewer Systems. If the State Water Board revises or reissues Order No. 2022-0103-DWQ during the term of this Order to extend coverage to the Facility, this Order may be reopened and revised to ensure consistency with and eliminate duplication of any applicable provisions and/or requirements.

e. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

   If the Amendments ultimately go into effect, this Order may be amended or modified to incorporate any newly-applicable requirements.

f. **Whole Effluent Toxicity.** - If after review of new data and information, it is determined that the discharge has reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions numeric aquatic toxicity objective and Basin Plan's narrative toxicity objective this Order may be reopened and effluent limitations added for acute toxicity.

2. Special Studies, Technical Reports and Additional Monitoring Requirements – NOT APPLICABLE

3. Best Management Practices and Pollution Prevention – NOT APPLICABLE

4. Construction, Operation and Maintenance Specifications

The Discharger must adhere to the following provisions to constitute compliance with the U.S. EPA Combined Sewer Overflow (CSO) Control Policy requirements for control of discharges from the Facility.

a. **Combined Wastewater Control System Plan of Operations.** The Discharger shall revise and update as necessary their Combined Wastewater Control System Plan of Operations to ensure compliance with the Nine Minimum Controls and Long-Term Control Plan (LTCP)requirements specified in Sections VI.C.4.b and VI.C.4.c below. The Combined Wastewater Control System Plan of Operations shall specify the procedures to be used by the Discharger to manage the CSS. The Combined Wastewater Control System Plan of Operations shall clearly establish operation, maintenance, and inspection procedures to maximize the removal of pollutants during and after each precipitation event using all available facilities within the combined wastewater collection and treatment system, with the goal of achieving the maximum treatment possible and minimizing CSO's and CSS outflows.

The Discharger shall operate the Facility in conformance with the Combined Wastewater Control System Plan of Operations and shall report any variation from the Plan in the next annual monitoring report as required in Attachment E (Section X.B). Any significant modifications to the Combined Wastewater Control System Plan of Operations that could impact discharge quantity or discharge quality must be submitted for review and approval by the Executive Officer. If within 30 days the Discharger has not received a response from the Executive Officer, then the Discharger may implement the modifications as proposed. Minor modifications to the Plan of Operations will be included in the annual reports.

b. **Nine Minimum Controls and CSS Outflow Controls.**

i. **Conduct Proper Operations and Regular Maintenance Programs.** The Discharger shall implement the Combined Wastewater Control System Plan of Operations that must include the elements listed in this section. The Discharger shall update the Combined Wastewater Control System Plan of Operations to include any changes to the system, or operation and maintenance procedures. The Discharger shall keep records to document the implementation of the Combined Wastewater Control System Plan of Operations and submit such documentation in accordance with the requirements specified in the Monitoring and Reporting Program (Attachment E) of this Order.

(a) **Organizational Structure for the Combined Sewer System.** The Combined Wastewater Control System Plan of Operations shall include an organizational structure (shown with an organizational chart or other documents) that provides the

names and telephone numbers of key personnel, the chain of command, and the relationships among various program components (e.g., operations, maintenance). In addition, the organizational structure should establish clear lines of communication, authority, and responsibility.

The Discharger shall designate the key personnel responsible for the combined wastewater collection and treatment system. These key personnel shall serve as the contacts for the CSO's and CSS outflows from the combined wastewater collection and treatment system. The Discharger shall notify the Central Valley Water Board within 90 days of new key personnel and update the organizational structure as necessary.

(b) **Inspection and Maintenance of the CSS.** The Discharger shall:

(1) Describe in the Combined Wastewater Control System Plan of Operations, the combined wastewater collection and treatment system maintenance program to be implemented. The maintenance program shall list and address at a minimum, the most critical elements of the combined wastewater collection and treatment system. "Critical elements" are those facilities that affect the performance of the combined wastewater collection and treatment system, the number and extent of CSS outflows and CSO's, or CSS outflow and CSO pollutant levels. The list should include, as appropriate, regulator structures, pumping stations, diversion structures, retention basins, sections of the CSS prone to sedimentation, all CSO discharge points, and the Pioneer Reservoir and CWTP primary treatment facilities. The list should include a physical description of each facility and its location.

At a minimum, the inspection and maintenance program shall include:

(i) A schedule for regular inspection and maintenance of all overflow structures, regulator, and pumping stations to ensure that they are in good working condition and adjusted to minimize overflows and outflows.

(ii) An inspection schedule for each potential overflow discharge point (i.e., Discharge Points 002, 003, 004,005, 006, and 007) and critical combined wastewater collection and treatment system facilities. This schedule shall specify at least one inspection per month during the dry weather season (1 May to 30 September) and more frequent inspection during the wet season (1 October to 30 April). The inspections shall include, but are not limited to, entering regulator

structures if accessible, determining the extent of debris and grit build-up, and removing any debris that may constrict flow, cause blockage, and result in dry weather overflows. For overflow discharge points that are inaccessible, the Discharger may perform a visual check.

(iii) Documentation of the presence of debris during inspections of these facilities, and removal of these wastes to avoid blockages during precipitation events.

(2) Record the results of the inspections and routine maintenance activities in a maintenance log.

(c) **Provision for Trained Staff.** The Discharger shall describe in the Combined Wastewater Control System Plan of Operations the number of full-time equivalents needed to operate, maintain, repair, and perform testing functions required to ensure compliance with the terms and conditions of this Order. The Combined Wastewater Control System Plan of Operations shall also describe the appropriate training required of each staff member to perform his/her responsibilities.

(d) **Allocation of Funds for Operation and Maintenance**. The Discharger shall document the funds available for combined wastewater collection and treatment system operation and maintenance (O&M) activities and the procedures for budgeting.

(e) **Untreated Discharges.** The Discharger shall provide, in the Combined Wastewater Control System Plan of Operations, the procedures for when and under what circumstances Discharge Points 004, 005 and 007 are used, as well as the treatment (if any) that is provided prior to discharge to the Sacramento River.

(f) **Fats, Oil, and Grease (FOG) Control Program.** The Discharger shall continue to implement a FOG control program to minimize the discharge of FOG wastes from households, restaurants and other food establishments.

ii. **Maximize Use of the Collection System for Storage**

(a) The Discharger shall maximize the use of the collection system for storage. The Discharger shall balance the storage needs with the goal of preventing outflows of sewage from the collection system to City streets.

(b) The Discharger shall maximize the in-line and off-line storage capacity of the combined sewer system.

(c) The Discharger shall keep records to document implementation of this control measure and submit them as part of the Nine

Minimum Controls Annual Report required in the Monitoring and Reporting Program (Attachment E, Section X.D.4).

iii. **Review and Modify Pretreatment Program.** The Discharger shall continue implementation of pollution prevention programs and outreach initiatives to minimize the potential impact of non-domestic discharges on the CSO's. The pretreatment program for indirect users that discharge to the Discharger's CSS is implemented by SacSewer.

iv. **Maximize Flow to POTW Treatment Plant.**

(a) The Discharger shall operate the CSS to maximize treatable flows to the POTW during wet weather events. The Discharger shall report rainfall and flow data to the Central Valley Water Board as part of the Nine Minimum Controls Annual Report required in the Monitoring and Reporting Program (Attachment E, SectionX.D.4).

(b) **Combined Wastewater Control System Plan of Operations.** The Discharger shall implement the Combined Wastewater Control System Plan of Operations consistent with the hydraulic capacities of the Discharger's storage, transport, treatment, and disposal facilities to achieve the following objectives:

(1) Maximize the volume of wastewater that is routed for treatment at the EchoWater Facility during wet weather events.

(2) For CSO's, the Discharger shall maximize the volume of wastewater that is captured at Pioneer Reservoir and the CWTP and receives, at a minimum, primary clarification or equivalent, solids and floatables disposal, and disinfection prior to discharge to the Sacramento River.

The Discharger shall maintain records documenting the achievement of these objectives and provide them as part of the Nine Minimum Controls Annual Report required in the Monitoring and Reporting Program (Attachment E, Section X.D.4).

v. **Prohibit Combined Sewer Overflows During Dry Weather**

(a) Dry weather overflows from Discharge Points 002 through 007are prohibited. The Discharger shall inspect all CSS overflow points in accordance with the requirements in SectionVI.C.4.b.i.(b) above. All dry weather overflows must be reported to the U.S. EPA and the Central Valley Water Board within 24 hours of the Discharger becoming aware of the dry weather overflow, consistent with the standard provision for 24-hour reporting in Attachment D, Section V.E.1. When the

Discharger becomes aware of a dry weather overflow, the Discharger shall begin corrective actions immediately.

(b) The Discharger shall inspect the dry weather overflow point each subsequent day after the overflow until the overflow has been eliminated. The Discharger shall record in the inspection log each dry weather overflow event, as well as the cause, the estimated volume of the dry weather overflow, the corrective action taken, and the dates on which the overflow began and ended.

vi. **Control Solid and Floatable Materials in CSOs**

(a) The Discharger shall continue to implement measures to control solid and floatable materials in its CSOs.

(b) The Discharger shall remove solid and floatable materials captured in the storage and transport facilities in an acceptable manner prior to discharge to the Sacramento River.

vii. **Develop and Implement Pollution Prevention Program**

(a) The Discharger shall continue to implement a pollution prevention program focused on reducing to the greatest extent possible, the amount of contaminants that enter the CSS and the impacts of CSO's on the Sacramento River.

(b) The Discharger shall keep records to document pollution prevention implementation activities and provide them as part of the Nine Minimum Controls Annual Report required in the Monitoring and Reporting Program (Attachment E, SectionX.D.4).

viii. **Notify the Public of Outflows and CSOs**

(a) The Discharger shall implement its "Spill Emergency Response Plan" for CSS outflow notifications and the "Combined Wastewater Collection and Treatment System Plan of Operations" for CSO notifications to ensure that the public is receiving adequate notification of CSS outflows and CSO's in accordance with the U.S. EPA's CSO Control Policy.

(b) The Discharger shall include as part of the public notification process, notification to downstream drinking water agencies whenever there is a CSS discharge to surface waters. At a minimum, the following agencies shall be notified via email or fax: the East Bay Municipal Utility District, Sacramento County Water Agency, the California Urban Water Agencies, the Contra Costa Water District, the Santa Clara Valley Water District, the Zone 7 Water Agency, the Alameda County Water District, and the Metropolitan Water District of Southern California. Freeport

Regional Water Authority/Sacramento County Water Agency shall be notified via a phone call within 2 hours upon initiating discharge to the Sacramento River.

ix. **Monitor to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls**

(a) The Discharger shall regularly monitor CSO outfalls to effectively characterize overflow impacts and the efficacy of CSO controls. The specific monitoring requirements for CSO's are provided in Attachment E (Monitoring and Reporting Program).

(b) The Discharger shall submit as part of its Nine Minimum Controls Annual Progress Report that is due on 30 January of each year (see Attachment E, Section X.D.4), a summary of existing monitoring data and an evaluation of the efficacy of CSO controls (including pollution prevention efforts) to minimize and/or prevent impacts from CSO's. If necessary, the Discharger shall propose revisions to the LTCP (including the Nine Minimum Controls) to improve the efficiency and effectiveness of controls.

(c) **CSS Outflow Volume Estimates**. The Discharger shall continue to provide accurate and reasonable estimates of outflows from the CSS. These methods shall be included in the Spill Emergency Response Plan.

c. **Long-Term Control Plan (LTCP)**

i. The Discharger shall continue implementation of the LTCP with the focus on updated goals directed at improving the CSS performance with increasing storm intensities. The Discharger is seeking to align the LTCP with the CSO Control Policy by migrating their LTCP approach from a focus on flood reduction goals to better identifying areas susceptible to system outflows, meeting receiving water quality objectives with a continued focus on reducing/eliminating untreated CSOs. The LTCP performance goals are as follows:

(a) **Protect Public Health** - Implement procedures and monitoring programs to ensure prompt identification, response and reporting of outflows, spills, and CSOs.

(b) **Collection System Assessment and Prioritization -** Conduct CSS collection system infrastructure assessment to identify and prioritize project needs that reduce outflows and spills.

(c) **CSS Treatment System Assessment and Prioritization** - Conduct CSS treatment system assessment to identify and prioritize project needs to maintain presumption approach compliance and continue to meet receiving water quality objectives.

(d) **Long-Term CSS Resiliency** - Establish short- and long-term Capital Improvement Plan (CIP) to address identified condition and hydraulic deficiencies resulting in outflows and other improvements that ensure presumption approach compliance.

ii. **Adaptive Management Strategy Implementation.** The Discharger shall implement the Adaptive Management Plan as presented in Chapter 7 of the LTCP.

As part of the Annual LTCP Progress Reports the Discharger shall report on the assessments (including specified metrics and system performance during storm events) prioritization, and the capital improvement plan; as well as action items completed that demonstrate, on the progress in achieving the performance goals listed above.

(a) The Discharger shall continue to implement the LTCP to ensure that CSS discharges do not cause exceedance of applicable water quality objectives.

(b) The Discharger shall continue to implement the LTCP to manage the flow capacity of the CSS to minimize CSO's and CSS outflows as new development and redevelopment projects are implemented throughout the CSS service area that have the potential to increase combined sewer system flows. The Discharger shall implement measures to the maximum extent practicable to ensure that new flows from growth within the CSS service area do not result in an increase in CSO's or CSS outflows or reduce the overall percentage of flow routed to the SacSewer EchoWater Facility.

5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – NOT APPLICABLE

6. Other Special Provisions

a. **Sludge/Biosolids Discharge Specifications**

i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, division 2, subdivision 1, section20005, et seq. Removal for further treatment, disposal, or reuse at sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy these specifications.

ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

7. Compliance Schedules

a. **Compliance Schedule for Final Effluent Limitations for Methylmercury. T**his Order requires compliance with the final effluent limitations for methylmercury by 31 December 2030. The Discharger shall comply with the time schedule shown in the Technical Reports Table (E-8) to ensure compliance with the final effluent limitations. Additional information regarding the compliance schedule, including completed tasks during the previous permit term, is described in the Fact Sheet (Attachment F, Section VI.B.7).

VII. COMPLIANCE DETERMINATION

A. Total Mercury Mass Loading Effluent Limitations (Section IV.A.1.g). The procedures for calculating mass loadings are as follows:

1. For Discharge Points 002, 003, and 006, the total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All effluent monitoring data collected under the monitoring and reporting program, pretreatment program, and any special studies shall be used for these calculations. The total annual mass loading shall be the sum of the individual calendar months for Discharge Points 002, 003, and 006.

2. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level. If compliance with the effluent limitation is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance shall be evaluated with consideration of the detection limits.

B. Total Residual Chlorine Effluent Limitations (Section IV.A.1.a). Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not

actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment D).

C. Chlorpyrifos and Diazinon Effluent Limitations (Section IV.A.1.f). The Discharger shall calculate and report the value of formula sum AMEL and formula sum MDEL for the effluent, using the equation in Effluent Limitations IV.A.1.e. Compliance shall be determined by calculating the sum (S), as provided in this Order, with analytical results that are reported as "non-detectable" concentrations to be considered to be zero.

D. Temperature Effluent Limitation (Section IV.A.1.d). Compliance with the final effluent limitations for temperature shall be ascertained as follows:

1. For Discharge Point 002 or 003, using the effluent monitoring results at Monitoring Location EFF-002 or EFF-003 measured within one day of the receiving water monitoring results measured at Monitoring Location RSW-003.

2. For Discharge Point 006, using the effluent monitoring results at Monitoring Location EFF-006 measured within one day of the receiving water monitoring results measured at Monitoring Location RSW-001.

E. Delta Regional Monitoring Program. Use of Delta Regional Monitoring Program and Other Receiving Water Data to Determine Compliance with Receiving Water Limitations. Delta Regional Monitoring Program data and other receiving water monitoring data that is not specifically required to be conducted by the Discharger under this permit will not be used directly to determine that the discharge is in violation of this Order. The Discharger may, however, conduct any site-specific receiving water monitoring deemed appropriate by the Discharger that is not conducted by the Delta Regional Monitoring Program and submit that monitoring data. As described in section VIII of Attachment E, such data may be used, if scientifically defensible, in conjunction with other receiving water data, effluent data, receiving water flow data, and other pertinent information to determine whether or not a discharge is in compliance with this Order.

ATTACHMENT A – DEFINITIONS

1Q10

The lowest one-day flow with an average reoccurrence frequency of once in ten years.

7Q10

The lowest average seven consecutive day flow with an average reoccurrence frequency of once in ten years.

Acute Aquatic Toxicity Test

A test to determine an adverse effect (usually lethality) on a group of aquatic test organisms during a short-term exposure (e.g., 24, 48, or 96 hours).

Alternative Hypothesis

A statement used to propose a statistically significant relationship in a set of given observations. Under the TST approach, when the Null Hypothesis is rejected, the Alternative Hypothesis is accepted in its place, indicating a relationship between variables and an acceptable level of toxicity.

Arithmetic Mean (μ)

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

Arithmetic mean = $\mu = \Sigma x / n$

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

Average Monthly Effluent Limitation (AMEL)

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

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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

Calendar Month(s)

A period of time from a day of one month to the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month (e.g., from January 1 to January 31, from June 15 to July 14, or from January 31 to February 28).

Calendar Quarter

A period of time defined as three consecutive calendar months.

Calendar Year

A period of time defined as twelve consecutive calendar months.

Chronic Aquatic Toxicity Test

A test to determine an adverse effect (sub-lethal or lethal) on a group of aquatic test organisms during an exposure of duration long enough to assess sub-lethal effects.

Carcinogenic

Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Combined Sewer System (CSS)
The collection and conveyance system for wastewater and storm water in a single pipe to a treatment facility. The City of Sacramento's CSS includes the collection system, pump stations, storage facilities, the CWTP/Pioneer Reservoir treatment facilities, and other miscellaneous ancillary facilities. The CSS is not a Publicly Owned Treatment Works (POTW).

Combined Sewer Overflow (CSO)
The CSO Control Policy defines a CSO as a discharge from a CSS at a point prior to the POTW Treatment Plant. CSOs consist of mixtures of domestic sewage, industrial and commercial wastewater, and storm water runoff. For the purposes of this Order, a CSO is a discharge to the Sacramento River from the CSS at Discharge Point(s) 002, 003, 004, 005, 006, and/or 007.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

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

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the

analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

DNQ are those 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

Dilution Credit is the 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.

Discharge Event

A discharge event is when a CSO discharge occurs from **Discharge Point(s) 002, 003, 004, 005, 006, and/or 007.** The event beginning is when discharge occurs at any of the discharge points, and it may be either continuous or intermittent CSO discharge. If discharge is not discontinued for more than six consecutive hours and 24 hours has not elapsed between the original discharge event start time to the resumption of discharge start time, the discharge event may last longer than 24-hours.

Effluent Concentration Allowance (ECA)

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

Enclosed Bays

Enclosed Bays means 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.

Endpoint

An effect that is measured in a toxicity study. Endpoints in toxicity tests may include, but are not limited to survival, reproduction, and growth. A measured response of a receptor to a stressor. An endpoint can be measured in a toxicity test or field survey.

Estimated Chemical Concentration

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries

Estuaries means 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 shall be 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 do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

The 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

The 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).

Instream Waste Concentration (IWC)

The concentration of effluent in the receiving water after mixing.

Maximum Daily Effluent Limitation (MDEL)

The 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

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

Method Detection Limit (MDL)

MDL is the minimum measured 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 in 40 C.F.R. Part 136, Attachment B.

Minimum Level (ML)

ML is the 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

Mixing Zone is a limited volume of receiving water that is 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 which are less than the laboratory's MDL.

Null Hypothesis

A statement used in statistical testing that has been put forward either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved.

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Outflow

A release of untreated or partially treated combined wastewater and storm water from the CSS due to surcharge from wet weather or system blockage. CSS outflows do not include combined sewer overflow (CSO) discharges from discharge points authorized under this Order (including Discharge Points 002 through 007).

Percent Effect

The percent effect at the instream waste concentration (IWC) shall be calculated using untransformed data and the following equation:

$$\text{Percent Effect of the Sample} = \frac{\text{Mean Control Response} - \text{Mean Sample Response}}{\text{Mean Control Response}} \cdot 100$$

Persistent Pollutants

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) 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. The Central Valley Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

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

Regulatory Management Decision (RMD)

The 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.

Response

A measured biological effect (e.g., survival, reproduction, growth) as a result of exposure to a stimulus.

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

Species Sensitivity Screening

An analysis to determine the single most sensitive species from an array of test species to be used in a single species laboratory test series.

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows:

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

where:

x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Statewide Toxicity Provisions

Refers to section III.B and section IV.B of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

Storm Year

A storm year is defined as 1 October through 30 September of the following year.

Test of Significant Toxicity (TST)

A statistical approach used to analyze aquatic toxicity test data, as described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

Toxicity Reduction Evaluation (TRE)

TRE is a study conducted in a stepwise 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 chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.).

WET Maximum Daily Effluent Limitation (MDEL)

For the purposes of chronic and acute aquatic toxicity, an MDEL is an effluent limitation based on the outcome of the TST approach and the resulting percent effect at the IWC.

WET Median Monthly Effluent Limit (MMEL)

For the purposes of chronic and acute aquatic toxicity, an MMEL is an effluent limitation based on a maximum of three independent toxicity tests analyzed using the TST approach during a calendar month.

WET Maximum Daily Effluent Target (MDET)

For the purposes of chronic aquatic toxicity, an MDET is a target used to determine whether a Toxicity Reduction Evaluation (TRE) should be conducted. Not meeting the MDET is not a violation of an effluent limitation.

WET Median Monthly Effluent Target (MMET)

For the purposes of chronic aquatic toxicity, an MMET is a target based on a maximum of three independent toxicity tests used to determine whether a TRE should be conducted. Not meeting the MMET is not a violation of an effluent limitation.

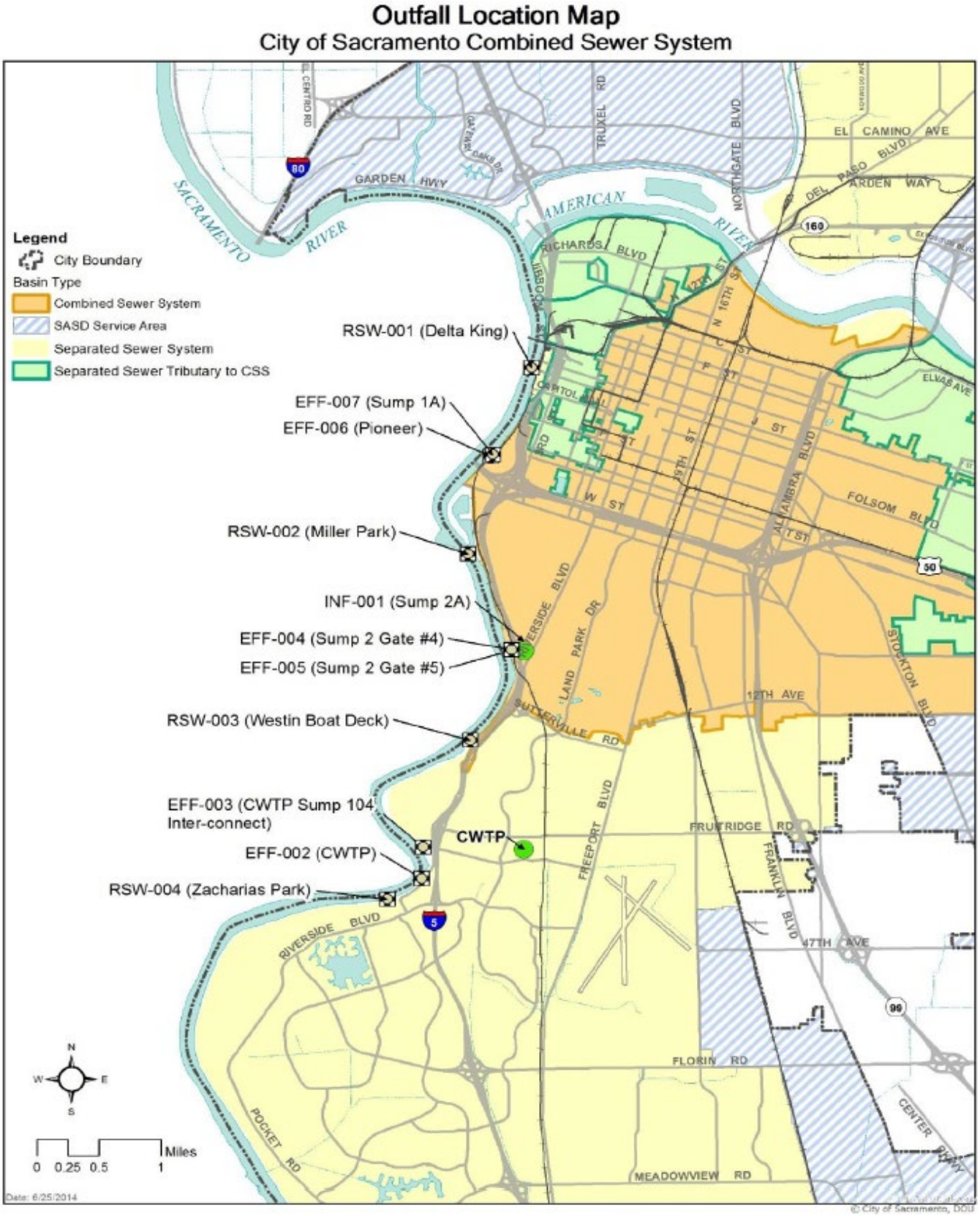
WET MMEL Compliance Tests

For the purposes of chronic and acute aquatic toxicity, a maximum of two tests that are used in addition to the routine monitoring test to determine compliance with the chronic and acute aquatic toxicity MMEL.

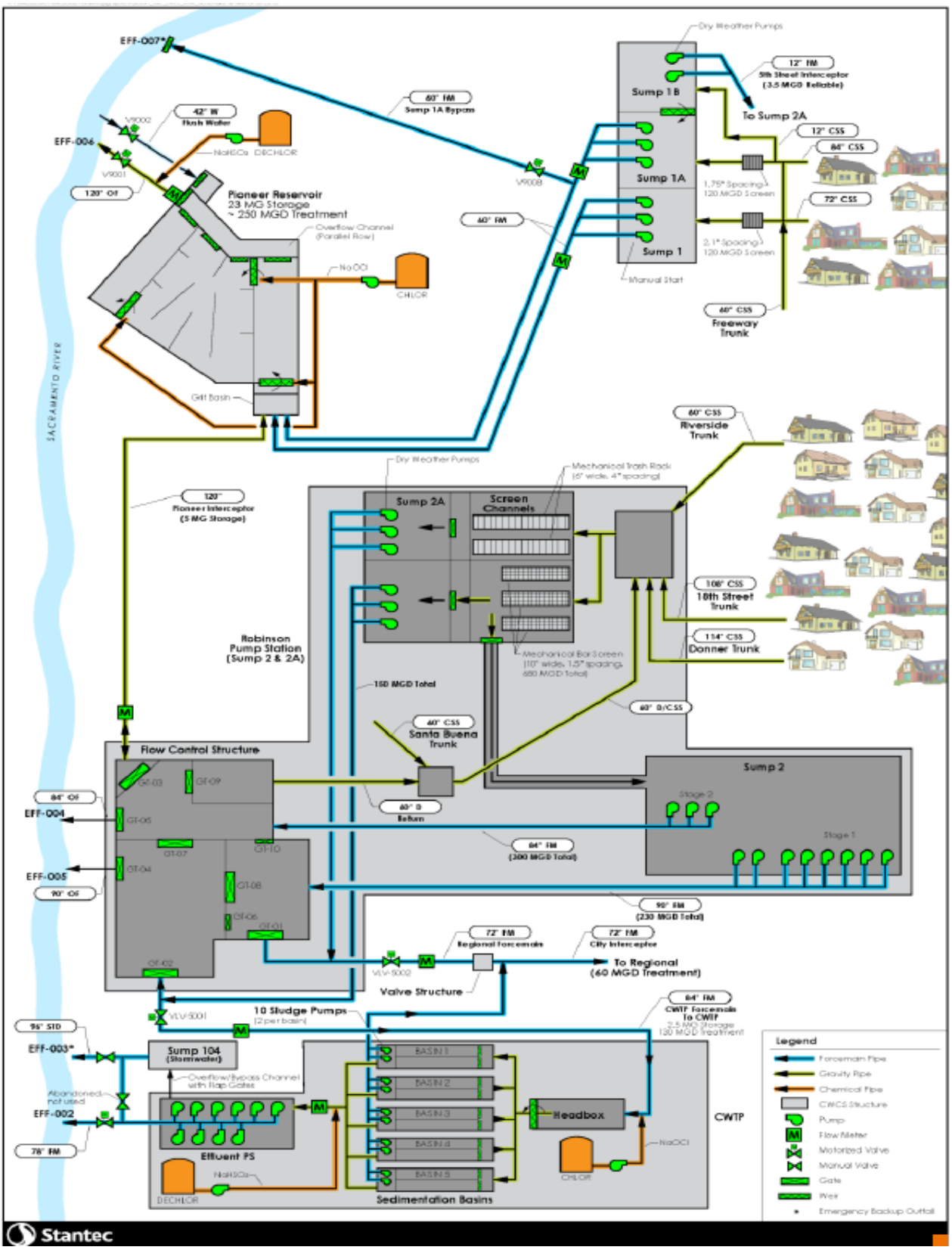
WET MMET Tests

For the purposes of chronic aquatic toxicity, for dischargers not required to comply with numeric chronic toxicity effluent limitations, MMET Tests are a maximum of two tests that are used in addition to the routine monitoring test to determine whether a TRE should be conducted.

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply:

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. section 122.41(a); Wat. Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA 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. section 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. 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. section 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes having 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. section 122.41(e).)

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Central Valley 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. section 1318(a)(4)(B); 40 C.F.R. section 122.41(i); Wat. Code, section 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(1); Wat. Code, sections 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(2); Wat. Code, sections 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(3); Wat. Code, section 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C section 1318(a)(4)(B); 40 C.F.R. section 122.41(i)(4); Wat. Code, sections 13267, 13383.)

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. section 122.41(m)(1)(i).)

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. section 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not

subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. section 122.41(m)(2).)

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

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. section 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. section 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Central Valley Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. section 122.41(m)(4)(i)(C).)

4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. section 122.41(m)(4)(ii).)

5. **Notice**

   a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Central Valley Water Board. As of 21 December 2023, all notices shall be submitted electronically to the initial recipient (State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. Part 3, section 122.22, and 40 C.F.R. Part 127. (40 C.F.R. section 122.41(m)(3)(i).)

   b. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Central Valley Water Board. As of 21 December 2023, all notices shall be submitted electronically to the initial recipient (State Water Board's California Integrated Water Quality System (CIWQS) Program website. (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40

C.F.R. Part 3, section 122.22, and 40 C.F.R. Part 127. (40 C.F.R. section 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. section 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. section 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. section 122.41(n)(3)):

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or

termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. section 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. section 122.41(j)(1).)

B. 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. subchapters N or O. 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 or O. For the purposes of this paragraph, a method is sufficiently sensitive when 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 or O for the measured pollutant or pollutant parameter, or when:

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;

    a. 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;

    b. 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.

    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, subchapters N or O, monitoring must be conducted according

to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. sections 122.21(e)(3), 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. section 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. section 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. section 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. section 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. section 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. section 122.41(j)(3)(vi).)

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Valley 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 Central Valley Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. section 122.41(h); Wat. Code, sections 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. section 122.41(k).)

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

3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. section 122.22(b)(1));

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. section 122.22(b)(2)); and

    c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 C.F.R. section 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Central Valley 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. section 122.22(c).)

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

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

6. Any person providing the electronic signature for such documents described in Standard Provision – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the 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 section 122.22(e).)

C. Monitoring Reports

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. section 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of 21 December 2016, all reports and forms must be submitted electronically to the initial recipient, defined in Standard Provisions – Reporting V.J, and comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. section 122.41(l)(4)(i).)

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance which 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 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 events 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 (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather.

   As of 21 December 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient (State Water Board) defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3. They 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. section 122.41(l)(6)(i).)

F. Planned Changes

The Discharger shall give notice to the Central Valley 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. section 122.41(l)(1)):

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. section 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley 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. section 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Central Valley 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. section 122.41(l)(7).)

I. Other Information

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

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the appropriate initial recipient, as determined by U.S. EPA, and as 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 listing. (40 C.F.R. section 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. section 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring and reporting requirements that implement federal and California requirements.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.

B. Final effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory accredited for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health), in accordance with the provision of Water Code section 13176. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event an accredited laboratory is not available to the Discharger for any onsite field measurements such as pH, dissolved oxygen (DO), electrical conductivity (EC) turbidity, temperature, and residual chlorine, such analyses performed by a non-accredited laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, DO, EC, turbidity, temperature, and residual chlorine must be kept onsite in the treatment facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and verified as necessary, at least yearly, to ensure their

continued accuracy. All flow measurement devices shall be verified at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. Laboratory analytical methods shall be sufficiently sensitive in accordance with the Sufficiently Sensitive Methods Rule (SSM Rule) specified under 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). A U.S. EPA-approved analytical method is sufficiently sensitive for a pollutant/parameter where:

1. The method minimum level (ML) is at or below the applicable water quality objective for the receiving water, or;

2. The method ML is above the applicable water quality objective for the receiving water but the amount of the pollutant/parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant/parameter, or;

3. the method ML is above the applicable water quality objective for the receiving water, but the ML is the lowest of the 40 C.F.R. 136 U.S. EPA-approved analytical methods for the pollutant/parameter.

G. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Resources Control Board at the following address or electronically via email to the DMR-QA Coordinator:

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

H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.

I. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	At a location that is representative of influent to the Pioneer Reservoir and Combined Wastewater Treatment Plant (CWTP) (Sump 2A) (Latitude 38° 32' 54" N, Longitude 121° 30' 29" W)
002	EFF-002	CWTP effluent at a point after chlorination downstream from last connection through which wastes can be admitted into the outfall (Latitude 38° 31' 09" N, Longitude 121° 31' 26" W)
003	EFF-003	CWTP (Storm Sump 104) effluent downstream from last connection through which wastes can be admitted into the outfall (Latitude 38° 31' 23" N, Longitude 121° 31' 25" W)
004	EFF-004	Sump 2/2A Gate #4 (Latitude 38° 32' 52" N, Longitude 121° 30' 37" W)
005	EFF-005	Sump 2/2A Gate #5 (Latitude 38° 32' 51" N, Longitude 121° 30' 37" W)
006	EFF-006	Pioneer Reservoir effluent at a point after chlorination downstream from last connection through which wastes can be admitted into outfall (Latitude 38° 34' 18" N, Longitude 121° 30' 48" W)
007	EFF-007	Pioneer Reservoir Combined Sump 1A Bypass (Latitude 38° 34' 19" N, Longitude 121° 30' 47" W)
--	RSW-001	Upstream of CSO Discharge Points 006 and 007, at the Delta King (Latitude 38° 34' 58" N, Longitude 121° 30' 26" W)
--	RSW-002	Downstream of Discharge Points 006 and 007, at Miller Park (Latitude 38° 33' 35" N, Longitude 121° 31' 01" W)
--	RSW-003	Downstream of Discharge Points 004 and 005, at Westin Boat Dock (Latitude 38° 32' 12" N, Longitude 121° 30' 60" W)
--	RSW-004	Downstream of Discharge Points 002 and 003, at Zacharias Park (Latitude 38° 31' 01" N, Longitude 121° 31' 45" W)

Table E-1 Note:

1. The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the Pioneer Reservoir and CWTP at Monitoring Location INF-001 in accordance with Table E-2 and the testing requirements described in section III.A.2 below. Samples shall be collected at

approximately the same time as effluent samples (i.e., the same discharge event) and should be representative of the influent for the period sampled. If no discharge from the CWTP (Discharge Points 002 or 003) and/or Pioneer Reservoir (Discharge Point 006) is occurring, no influent monitoring is required (and the Discharger shall indicate that no discharge occurred thus no monitoring was required in the monthly self-monitoring reports required in Section X.B. of this Monitoring and Reporting Program).

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
Total Suspended Solids	mg/L	Grab or flow-weighted composite	1/Discharge Event
Settleable Solids	ml/L	Grab or flow-weighted composite	1/Discharge Event

2. **Table E-2 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-2:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136; or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

   b. **Flow.** Flow monitoring is required continuously during the discharge event that resulted in a discharge from Discharge Points 002, 003, and/or006.

   c. **1/Discharge Event Sampling.** At least one grab sample aliquot is required during the first 4 hours of a discharge from Discharge Points002, 003 and/or 006. If the duration of the discharge event is greater than 24 hours, daily samples shall be collected. One or more grab or auto sampler aliquots should be composited based on the expected influent flow that is discharged when considering discharge duration and facility treatment. For the purpose of sample collection and reporting, an event is any discharge in a 24-hour period, including discharge interruptions. In cases where a discharge ceases for longer than six hours and begins again spanning more than 24 hours after the start of the original discharge event, a discharge event will be added.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-002 (CWTP), EFF-003 (CWTP – Sump 104), and EFF-006 (Pioneer Reservoir)

1. When discharging to surface water, the Discharger shall monitor CWTP effluent at Monitoring Locations EFF-002, EFF-003, and Pioneer Reservoir effluent at Monitoring Location EFF-006 in accordance with Table E-3 and the testing requirements described in sectionIV.A.2 below. If no discharge from the CWTP (Discharge Points 002 and 003) and/or Pioneer Reservoir (Discharge Point 006) is occurring, no effluent monitoring is required (and the Discharger shall indicate that "no discharge occurred" in the monthly self-monitoring reports required in Section X.B. of this Monitoring and Reporting Program).

Table E-3. Effluent Monitoring (EFF-002, EFF-003,and EFF-006)

Parameter	Units	Sample Type	Minimum Sampling Frequency
Maximum Event Flow Rate	MGD	Meter	Continuous
Total Discharge Event Volume	Million gallons	Meter	Continuous
Duration of Discharge	Minutes	Calculate	Continuous
Monthly Average Flow	MGD	Calculate	Continuous
Total Suspended Solids (TSS)	mg/L	Grab or Flow-weighted Composite	1/Discharge Event
TSS	% removal	Calculate	1/Discharge Event
Settleable Solids	ml/L	Grab	1/Discharge Event
pH	standard units	Grab	1/Discharge Event
Dissolved Oxygen	mg/L	Grab	1/Discharge Event
Fecal Coliform Organisms	MPN/100 mL	Grab	1/Discharge Event
Chlorine, Total Residual	mg/L	Grab	1/Discharge Event
Dechlorination Agent Residual	mg/L	Grab	1/Discharge Event
Mercury, Total Recoverable	µg/L	Grab	1/Discharge Event
Methylmercury	µg/L	Grab	1/Discharge Event
Chlorpyrifos	µg/L	Grab	1/Discharge Event
Diazinon	µg/L	Grab	1/Discharge Event
Temperature	° F	Grab	1/Discharge Event
Ammonia, Total (as N)	mg/L	Grab	1/Discharge Event

2. **Table E-3 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-3:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

b. **Parameters with "Continuous" Minimum Sampling Frequency.** Required continuously during the discharge event that resulted in a discharge from Discharge Points 002, 003, and/or 006.

c. **Parameters with "1/Discharge Event" Minimum Sampling Frequency.** At least one grab sample is required during the first 4 hours of discharge. If the duration of the discharge event is greater than 24 hours, daily samples shall be collected. Composite sample scan consists of one or more grab samples combined based on a discharge flow weighting. For the purpose of sample collection and reporting, an event is any discharge in a 24-hour period, including discharge interruptions. In cases where a discharge ceases for longer than six hours and begins again spanning more than 24 hours after the start of the original discharge event, a discharge event will be added.

d. **TSS Percent Removal.** Report removal efficiency (%) for each discharge event using influent (Monitoring Location INF-001) and effluent values for Discharge Points 002, 003 and 006.

e. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using **clean hands/dirty hands procedures**, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at U.S. EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a **reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury**.

f. **Chlorpyrifos and Diazinon** shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than the Basin Plan Water Quality Objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

g. **Total Residual Chlorine and Dechlorination Agent Residual.** Total residual chlorine and dechlorination agent residual must be sampled at the same time and must be monitored using an analytical method that is sufficiently sensitive to measure at the permitted level of 0.01 mg/L, or to show the presence of a positive residual dechlorination agent.

h. **Handheld Field Meter.** A handheld field meter may be used for **temperature**, **pH**, and **DO** provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

i. **Monthly Average Flow.** calculated as the total volume of discharge in million gallons for the reporting month divided by the number of days in

the month. Months where there is no discharge the Discharger shall report "0 MGD."

j. **Whole Effluent Toxicity monitoring** - shall be in accordance with section V of this MRP.

B. Monitoring Location EFF-004, EFF-005, and EFF-007

1. When discharging to surface water, the Discharger shall monitor effluent from Sumps 2/2A effluent at Monitoring Location EFF-004 and EFF-005, and untreated effluent Pioneer Reservoir Combined Sump 1A at Monitoring Location EFF-007, in accordance with Table E-4 and the testing requirements described in section IV.B.2 below. If no discharge from Discharge Points 004, 005 and/or 007 is occurring, no effluent monitoring is required (and the Discharger shall indicate that “no discharge occurred” in the monthly self-monitoring reports required in Section X.B. of this Monitoring and Reporting Program).

Table E-4. Effluent Monitoring (EFF-004, EFF-005, and EFF-007)

Parameter	Units	Sample Type	Minimum Sampling Frequency
Maximum Event Flow Rate	MGD	Meter	Continuous
Total Discharge Event Volume	Million gallons	Meter	Continuous
Duration of Discharge	Minutes	Calculate	Continuous
Monthly Average Flow	MGD	Calculate	Continuous
pH	Standard Units	Grab	1/Discharge Event
Dissolved Oxygen	mg/L	Grab	1/Discharge Event
Temperature	° F	Grab	1/Discharge Event
Total Suspended Solids	mg/L	Grab or Flow-weighted Composite	1/Discharge Event
Settleable Solids	ml/L	Grab	1/Discharge Event
Fecal Coliform Organisms	MPN/100 mL	Grab	1/Discharge Event
Ammonia, Total (as N)	mg/L	Grab	1/Discharge Event

2. **Table E-4 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-4:

a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

b. **Parameters with “Continuous” Minimum Sampling Frequency.** Required continuously during the discharge event that resulted in a discharge from Discharge Points 004, 005, and/or 007.

c. **Parameters with "1/Discharge Event" Minimum Sampling Frequency.** At least one grab sample is required during the first 4 hours of a discharge. If the duration of the discharge event is greater than 24 hours, daily samples shall be collected. Composite samples can consist of one or more grab samples combined based on a discharge flow weighting. For the purpose of sample collection and reporting, an event is any discharge in a 24-hour period, including discharge interruptions. In cases where a discharge ceases for longer than six hours and begins again spanning more than one calendar day, a discharge event will be added.

d. **Handheld Field Meter.** A handheld field meter may be used for **temperature** and **pH**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

e. **Monthly Average Flow.** calculated as the total volume of discharge in million gallons for the reporting month divided by the number of days in the month. Months where there is no discharge the City should report "0 MGD"

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS –

A. Toxicity Calendar Storm Year. The toxicity calendar storm year is defined as 1 October through 30 September of the following year.

B. Acute Toxicity Testing. Beginning with the 2026/2027 storm year, the Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. **Instream Waste Concentration (IWC) for Acute Toxicity.** The acute toxicity IWC is 100 percent effluent.

2. **Routine Monitoring Frequency.** The Discharger shall perform acute toxicity testing 1/storm year, concurrent with effluent ammonia sampling. The acute toxicity testing should be targeted for the first discharge event of the storm year.

3. **Test Species** – Test species shall be fathead minnow (*Pimephales promelas*).

5. **Sample Types.** The Discharger may use flow-through or static renewal testing. For static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Locations EFF-002, EFF-003, EFF-004, EFF-005, EFF-006 and EFF 007.

6. **Test Species.** Test species shall be fathead minnows (*Pimephales promelas*).

7. **Methods.** The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition or methods identified in the Code of Federal Regulations, title 40, part 136, or other U.S. EPA-approved methods. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

8. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must conduct a replacement test as soon as possible.

C. Quality Assurance and Additional Requirements. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are below.

1. The discharge is subject to determination of "Pass" or "Fail" from an acute toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

2. The null hypothesis (Ho) for the TST statistical approach is:

   Mean discharge IWC response ≤ RMD x Mean control response, where the the acute RMD = 0.80.

   A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail."

3. The relative "Percent Effect" at the discharge IWC is defined and reported as:

   Percent Effect = ((Mean control response – Mean discharge IWC response) / Mean control response) x 100.

   This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations, i.e., a control and IWC. The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC differs from the control, the test result is "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

D. WET Testing Reporting Requirements. The Discharger shall submit the full laboratory report for all toxicity testing as an attachment to CIWQS for the reporting period (e.g., monthly, quarterly, semi-annually or annually) and provide the data (i.e., Pass/Fail) in the PET tool for uploading into CIWQS. The laboratory report shall include:

1. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the IWC for the discharge, the dates of sample

collection and initiation of each toxicity test, all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE investigations.

2. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.

3. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

4. **Acute WET Reporting**. Acute toxicity test results shall be submitted with the monthly discharge self-monitoring reports and reported as percent survival.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger is required to participate in the Delta Regional Monitoring Program. Delta Regional Monitoring Program data is not intended to be used directly to represent either upstream or downstream water quality for purposes of determining compliance with this Permit. Delta Regional Monitoring Program monitoring stations are established generally as “integrator sites” to evaluate the combined impacts on water quality of multiple discharges into the Delta; Delta Regional Monitoring Program monitoring stations would not normally be able to identify the source of any specific constituent but would be used to identify water quality issues needing further evaluation. Delta Regional Monitoring Program monitoring data, along with individual Discharger data, may be used to help establish background receiving water quality for evaluating impacts on receiving water beneficial uses in an NPDES permit after evaluation of the applicability of the data for that purpose. Delta Regional Monitoring Program data, as with all environmental monitoring data, can provide an assessment of water quality at a specific place and time that can be used in conjunction with other information, such as other receiving water monitoring data, spatial and temporal distribution and trends of receiving water data, effluent data from the Discharger’s discharge and other point and non-point source discharges, receiving water flow volume, speed and direction, and other information to determine the likely source or sources of a constituent that resulted in exceedance of a receiving water quality objective.

A. Monitoring Location RSW-001, RSW-002, RSW-003, and RSW-004

1. When discharging to the Sacramento River, the Discharger shall monitor the Sacramento River at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 in accordance with Table E-5 and the testing requirements described in section A.2 below. Samples shall be collected at Monitoring Locations RSW-001 and RSW-002 when discharge is occurring at Discharge Point(s) 006 and/or 007. Samples shall be collected at Monitoring Locations RSW-002 and RSW-003 when discharge is occurring at Discharge Point(s) 004 and/or 005.Samples shall

be collected at Monitoring Locations RSW-003 and RSW-004 when discharge is occurring at Discharge Point(s) 002 and/or 003.:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	standard units	Grab	2 discharge events per storm year as follows: One discharge event occurring 1 October – 31 December; and One discharge event occurring 1 January – 30 September; or An untreated discharge from EFF-004, EFF-005, or EFF-007
Dissolved Oxygen	mg/L	Grab	
Temperature	°F (°C)	Grab	
Fecal Coliform	MPN/100 mL	Grab	
Ammonia Nitrogen, Total (as N)	mg/L	Grab	
Turbidity	NTU	Grab	

2. **Table E-5 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-5:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

   Within the first 4 hours of the beginning of storm causing discharge at any of the Discharge Points (002, 003, 004, 005, 006, and/or 007) should safety conditions be satisfied, and daily if the discharge event is greater than 24 hours. Consideration will be given for events lasting less than 2 hours in duration due to the difficulty involved in collecting receiving water samples during short discharge events. For events that last less than 2 hours the Discharger shall make an effort to collect samples. Receiving water monitoring is not required if hazardous conditions threaten the health and safety of the sampling crew's ability to collect samples utilizing the appropriate preventative measures. If this is the case, the monitoring report shall contain a complete description of the reason samples were not collected.

   b. If two discharge events have already been monitored for the monitoring year and then an untreated discharge occurs at either EFF-004, EFF-005, or EFF-007, the Discharger shall also monitor the receiving water upstream and downstream of that discharge point for one untreated discharge event per monitoring year.

3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-004 when discharging to the Sacramento River. Attention shall be given to the presence of:

   a. Floating or suspended matter;

   b. Discoloration;

   c. Bottom deposits;

   d. Aquatic life;

   e. Visible films, sheens, or coatings;

   f. Fungi, slimes, or objectionable growths; and

   g. Potential nuisance conditions.

   Notes on receiving water conditions shall be summarized in the monitoring report.

IX. OTHER MONITORING REQUIREMENTS

A. Effluent Characterization

The Discharger is participating in the Delta Regional Monitoring Program as described in Attachment E, Section VIII; therefore, the receiving water portion of the Effluent and Receiving Water Characterization is not required.

1. **Monitoring Frequency.** Samples shall be collected from the effluent (Monitoring Locations EFF-002, EFF-003, EFF-004, EFF-005, EFF-006, and EFF-007) once per storm year when discharging to the Sacramento River, and analyzed for the constituents listed in Table E-6, below. At least one effluent characterization sample must be collected during the permit term. Constituents shall be collected and analyzed consistent with the Discharger's Analytical Methods Report (MRP, X.D.2) using sufficiently sensitive analytical methods and Reporting Levels per the SSM Rule specified in 40 C.F.R.122.21(e)(3) and 122.44(i)(1)(iv). The "Reporting Level" is synonymous with the "Method Minimum Level" described in the SSM Rule. Annual monitoring shall be conducted, and the results of such monitoring be submitted to the Central Valley Water Board with the annual self-monitoring reports. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

2. **Analytical Methods Report.** Constituents shall be collected and analyzed consistent with the Discharger's Analytical Methods Report (MRP, X.D.2) using sufficiently sensitive analytical methods and Reporting Levels (RLs) per the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). The "Reporting Level" is synonymous with the "Method Minimum Level" described in the SSM Rule.

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a

certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-8.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-6 and the testing requirements described in section IX.E-5 below.

Table E-6. Effluent Characterization Monitoring

VOLATILE ORGANICS

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
25	2-Chloroethyl vinyl Ether	110-75-8	µg/L	Grab
17	Acrolein	107-02-8	µg/L	Grab
18	Acrylonitrile	107-13-1	µg/L	Grab
19	Benzene	71-43-2	µg/L	Grab
20	Bromoform	75-25-2	µg/L	Grab
21	Carbon Tetrachloride	56-23-5	µg/L	Grab
22	Chlorobenzene	108-90-7	µg/L	Grab
24	Chloroethane	75-00-3	µg/L	Grab
26	Chloroform	67-66-3	µg/L	Grab
35	Methyl Chloride	74-87-3	µg/L	Grab
23	Dibromochloromethane	124-48-1	µg/L	Grab
27	Dichlorobromomethane	75-27-4	µg/L	Grab
36	Methylene Chloride	75-09-2	µg/L	Grab
33	Ethylbenzene	100-41-4	µg/L	Grab
89	Hexachlorobutadiene	87-68-3	µg/L	Grab
34	Methyl Bromide (Bromomethane)	74-83-9	µg/L	Grab
94	Naphthalene	91-20-3	µg/L	Grab
38	Tetrachloroethylene (PCE)	127-18-4	µg/L	Grab
39	Toluene	108-88-3	µg/L	Grab
40	trans-1,2-Dichloroethylene	156-60-5	µg/L	Grab
43	Trichloroethylene (TCE)	79-01-6	µg/L	Grab
44	Vinyl Chloride	75-01-4	µg/L	Grab
21	Methyl-tert-butyl ether (MTBE)	1634-04-4	µg/L	Grab
41	1,1,1-Trichloroethane	71-55-6	µg/L	Grab
42	1,1,2-Trichloroethane	79-00-5	µg/L	Grab
28	1,1-Dichloroethane	75-34-3	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	75-35-4	µg/L	Grab

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
31	1,2-Dichloropropane	78-87-5	µg/L	Grab
32	1,3-Dichloropropylene	542-75-6	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	Grab
101	1,2,4-Trichlorobenzene	120-82-1	µg/L	Grab
29	1,2-Dichloroethane	107-06-2	µg/L	Grab
75	1,2-Dichlorobenzene	95-50-1	µg/L	Grab
76	1,3-Dichlorobenzene	541-73-1	µg/L	Grab
77	1,4-Dichlorobenzene	106-46-7	µg/L	Grab

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab
80	Dimethyl Phthalate	131-11-3	µg/L	Grab
86	Fluoranthene	206-44-0	µg/L	Grab
87	Fluorene	86-73-7	µg/L	Grab
88	Hexachlorobenzene	118-74-1	µg/L	Grab
90	Hexachlorocyclopentadiene	77-47-4	µg/L	Grab
91	Hexachloroethane	67-72-1	µg/L	Grab
92	Indeno(1,2,3-cd) Pyrene	193-39-5	µg/L	Grab
93	Isophorone	78-59-1	µg/L	Grab
98	N-Nitrosodiphenylamine	86-30-6	µg/L	Grab
96	N-Nitrosodimethylamine	62-75-9	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	621-64-7	µg/L	Grab
95	Nitrobenzene	98-95-3	µg/L	Grab
53	Pentachlorophenol (PCP)	87-86-5	µg/L	Grab
99	Phenanthrene	85-01-8	µg/L	Grab
54	Phenol	108-95-2	µg/L	Grab
100	Pyrene	129-00-0	µg/L	Grab

INORGANICS

CTR Number	Inorganic Parameters	CAS Number	Units	Effluent Sample Type
NL	Aluminum	7429-90-5	µg/L	Grab
1	Antimony, Total	7440-36-0	µg/L	Grab
2	Arsenic, Total	7440-38-2	µg/L	Grab
15	Asbestos	1332-21-4	µg/L	Grab
3	Beryllium, Total	7440-41-7	µg/L	Grab
4	Cadmium, Total	7440-43-9	µg/L	Grab
5a	Chromium, Total	7440-47-3	µg/L	Grab
6	Copper, Total	7440-50-8	µg/L	Grab
14	Iron, Total	7439-89-6	µg/L	Grab
7	Lead, Total	7439-92-1	µg/L	Grab
8	Mercury, Total	7439-97-6	µg/L	Grab
NL	Mercury, Methyl	22967-92-6	µg/L	Grab
NL	Manganese, Total	7439-96-5	µg/L	Grab
9	Nickel, Total	7440-02-0	µg/L	Grab
10	Selenium, Total	7782-49-2	µg/L	Grab
11	Silver, Total	7440-22-4	µg/L	Grab
12	Thallium, Total	7440-28-0	µg/L	Grab
13	Zinc, Total	7440-66-6	µg/L	Grab

NON-METALS/MINERALS

CTR Number	Non-Metal/Mineral Parameters	CAS Number	Units	Effluent Sample Type
NL	Boron	7440-42-8	µg/L	Grab
NL	Chloride	16887-00-6	mg/L	Grab
14	Cyanide, Total (as CN)	57-12-5	µg/L	Grab
NL	Sulfate	14808-79-8	mg/L	Grab
NL	Sulfide (as S)	5651-88-7	mg/L	Grab

PESTICIDES/PCBs/DIOXINS

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
110	4,4-DDD	72-54-8	µg/L	Grab
109	4,4-DDE	72-55-9	µg/L	Grab
108	4,4-DDT	50-29-3	µg/L	Grab
112	alpha-Endosulfan	959-98-8	µg/L	Grab
103	alpha-BHC (Benzene hexachloride)	319-84-6	µg/L	Grab
102	Aldrin	309-00-2	µg/L	Grab
113	beta-Endosulfan	33213-65-9	µg/L	Grab
104	beta-BHC (Benzene hexachloride)	319-85-7	µg/L	Grab
107	Chlordane	57-74-9	µg/L	Grab
106	delta-BHC (Benzene hexachloride)	319-86-8	µg/L	Grab
111	Dieldrin	60-57-1	µg/L	Grab
114	Endosulfan Sulfate	1031-07-8	µg/L	Grab
115	Endrin	72-20-8	µg/L	Grab
116	Endrin Aldehyde	7421-93-4	µg/L	Grab
117	Heptachlor	76-44-8	µg/L	Grab
118	Heptachlor Epoxide	1024-57-3	µg/L	Grab
105	gamma-BHC (Benzene hexachloride or Lindane)	58-89-9	µg/L	Grab
119	Polychlorinated Biphenyl (PCB) 1016	12674-11-2	µg/L	Grab
120	PCB 1221	11104-28-2	µg/L	Grab
121	PCB 1232	11141-16-5	µg/L	Grab
122	PCB 1242	53469-21-9	µg/L	Grab
123	PCB 1248	12672-29-6	µg/L	Grab
124	PCB 1254	11097-69-1	µg/L	Grab
125	PCB 1260	11096-82-5	µg/L	Grab
126	Toxaphene	8001-35-2	µg/L	Grab
16	2,3,7,8-TCDD (Dioxin)	1746-01-6	mg/L	Grab

CONVENTIONAL PARAMETERS

CTR Number	Conventional Parameters	CAS Number	Units	Effluent Sample Type
NL	pH	--	SU	Grab

CTR Number	Conventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Temperature	--	ºC	Grab

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Foaming Agents (MBAS)	MBAS	mg/L	Grab
NL	Hardness (as CaCO3)	471-34-1	mg/L	Grab
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos /cm	Grab
NL	Total Dissolved Solids (TDS)	TDS	mg/L	Grab
NL	Dissolved Organic Carbon (DOC)	DOC	mg/L	Grab

NUTRIENTS

CTR Number	Nutrient Parameters	CAS Number	Units	Effluent Sample Type
NL	Ammonia (as N)	7664-41-7	mg/L	Grab
NL	Nitrate (as N)	14797-55-8	mg/L	Grab
NL	Nitrite (as N)	14797-65-0	mg/L	Grab
NL	Phosphorus, Total (as P)	7723-14-0	mg/L	Grab

5. **Table E-6 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-6:

    a. **Applicable to All Parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

    b. **Sample Type.** All effluent samples shall be taken as GRAB samples. However, the Discharger may collect effluent flow-weighted composite samples if effluent variability is high enough and a grab sample will not adequately characterize the effluent quality.

    c. **Grab Samples.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.

    d. **24-hour Composite Samples.** All 24-hour composite samples shall be collected from a 24-hour flow proportional composite.

    e. **Redundant Sampling.** The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table E-4, with the exception of hardness which shall be sampled concurrently with the hardness-dependent metals (cadmium, chromium III, lead, nickel, silver, and zinc).

    f. **Bis (2-ethylhexyl) phthalate.** In order to verify if bis (2-ethylhexyl) phthalate is truly present, the Discharger shall take steps to assure that sample

containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

g. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

h. **TCDD-Dioxin Congener Equivalents** shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP.

i. **Chlorpyrifos and Diazinon** shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than the Basin Plan Water Quality Objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act" of 1986.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to 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 results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMRs are required even if there is no discharge. If no discharge occurs during the month, the monitoring report must be submitted stating that there has been no discharge.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Year	Permit effective date	1 January through 31 December	1 February of following year
1/Storm Year	Permit effective date	1 October through 30 September	Submit with monthly SMR
1/ Discharge Event	Permit effective date	First day of the calendar month through last day of the calendar month	Submit with monthly SMR

Table E-7 Notes:

1) For the purpose of sample collection and reporting, an event is any discharge in a 24-hour period, including discharge interruptions. In cases where a discharge ceases for longer than six hours and begins again spanning more than more than 24-hours after the start of the original discharge event, a discharge event will be added.
2) Monthly SMRs are due the first day of second calendar month following month of sampling.

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current laboratory's 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:

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

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

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

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

d. Dischargers are to 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.

5. **Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

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

6. **The Discharger shall submit SMRs** in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is

operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is 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 within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. The Discharger shall attach all final laboratory reports from all contracted commercial laboratories, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed.

d. **Untreated Discharge Evaluation Report.** Following any discharges from Sump 2 Bypass (Discharge Points 004 and 005) and/or Sump 1A Bypass (Discharge Point 007), the Discharger shall prepare and submit a report to the Central Valley Water Board with the monthly SMR, that describes the circumstances under which the overflow(s) occurred. As part of this report, the Discharger shall evaluate whether the overflows could have been avoided with operational measures and infrastructure improvements and propose as necessary any modifications to the Combined Wastewater Control System Plan of Operations that minimize future untreated overflows.

C. Discharge Monitoring Reports (DMRs)

1. 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 any upgraded version. Electronic DMR submittal will be in addition to electronic SMR submittal. Information about electronic DMR submittal (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/) is available on the Internet.

D. Other Reports

1. **Report of Waste Discharge (ROWD).** For the 5-year permit renewal, the Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing, at minimum, the following by the due date in the Technical Reports Table E-8:
   a. Report of Waste Discharge (Form 200);
   b. NPDES Form 1;
   c. NPDES Form 2A;

2. **Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report, electronically via CIWQS submittal, by the due date shown in the Technical Reports Table E-8. The Analytical Methods Report shall include the following for each constituent to be monitored in accordance with this Order: 1) applicable water quality objective, 2) reporting level (RL), 3) method detection limit (MDL), and 4) analytical method. The analytical methods shall be sufficiently sensitive with RLs consistent with the SSM Rule per 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv), and with the Minimum Levels (MLs) in the SIP, Appendix 4. The "Reporting Level or RL" is synonymous with the "Method Minimum Level" described in the SSM Rule. If an RL is not less than or equal to the applicable water quality objective for a constituent, the Discharger shall explain how the proposed analytical method complies with the SSM Rule as outlined above in Attachment E, section I.F. Central Valley Water Board staff will provide a tool with the permit's Notice of Adoption to assist the Discharger in completing this requirement. The tool will include the constituents and associated applicable water quality objectives to be included in the Analytical Methods Report.

3. **Combined Sewer System Outflow Reporting.** The Discharger shall comply with reporting requirements for combined sewer system outflows in accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order 2022-0103-DWQ) , or any revisions thereof.

4. **Nine Minimum Controls Annual Progress Report**. The Discharger shall submit documentation that demonstrates implementation of each of the nine minimum controls that includes the elements contained in Sections X.D.4.a-i below. The report will include annual operational and maintenance data as well as summaries of updates that are made to operational plans for the reporting year. The Discharger shall submit this documentation to the Central Valley Water Board annually by the due date shown in the Technical Reports Table E-8.

    a. **Proper operation and regular maintenance programs.** The Discharger shall submit:

        i. A list identifying critical combined wastewater collection and treatment system components requiring routine maintenance and operation.

        ii. An evaluation of operation and maintenance procedures performed during the previous fiscal year.

        iii. Estimated resources (manpower, equipment, and training) required for maintenance of the CSS and CSO structures during the previous fiscal year.

        iv. An organizational chart or diagram detailing names and telephone numbers of key personnel to contact regarding the plant for emergency and routine situations, the chain of command, names and general

responsibilities of all persons employed at the Facility, and the relationship among various program components.

v. A record of overflows that occurred during the previous storm year, including the date, location, duration, and volume of each overflow.

vi. A summary of completed inspections and maintenance performed.

vii. A status report on implementation of the Fats, Oils and Grease (FOG) control program.

viii. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

ix. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

b. **Maximization of the sewer collection system storage.** The Discharger shall submit:

i. A description of the actions taken to maximize collection system storage during the previous year.

ii. Schedules for completing any construction necessary to implement storage projects the Discharger previously committed to implement, including the current status of projects underway, final completion dates, and dates by which interim steps will be completed.

c. **Review and modify the pretreatment program.** The Discharger shall submit:

i. Any Discharger-initiated changes to the SacSewer's pretreatment program.

d. **Maximize flow to the POTW Treatment Plant**. The Discharger shall submit:

i. Rainfall and flow data associated with the all storm events during the previous storm year to characterize CSS performance. The summary shall include treated and untreated discharge volumes, including flows to POTW; number and volumes of CSS outflows; and storage facility performance.

ii. Documentation that flows were maximized in accordance with the Combined Wastewater Control System Plan of Operations.

e. **Elimination of CSOs during dry weather.** The Discharger shall submit:

i. A summary of dry weather overflows that have occurred since its last report.

ii. The cause of, the estimated volume of, and the corrective actions taken to eliminate, each dry weather overflow that occurred since the last report.

iii. Description of the procedures used to detect dry weather overflows and notify the U.S. EPA and the Central Valley Water Board within 24 hours of detecting a dry weather overflow.

f. **Control of solid and floatable materials in CSOs.** The Discharger shall submit:

i. A description of control measures currently in place for limiting the volume of solid and floatable materials in the CSOs.

g. **Pollution prevention programs to reduce contaminants in CSOs.** The Discharger shall submit:

i. Documentation of pollution prevention program actions taken since its last report.

ii. Annual progress reports on the SacSewer's and Sacramento Stormwater Quality Partnership's pollution prevention activities for mercury. The progress reports shall discuss the effectiveness of the pollution prevention activities that reduce mercury in the discharge, including a summary of mercury and methylmercury monitoring results.

h. **Public notification.** The Discharger shall submit:

i. Any updated procedures for notifying governmental entities of outflows and CSO's, including the names and titles of the specific officials to be notified, the names and titles of the persons responsible for making the notifications and the timeframes within which the notifications must be made.

ii. Documentation that Discharge Points 002 through 007 are posted with signs informing the public of potential health risks and adverse environmental impacts. If these discharge points are already posted, the Discharger shall submit the language that is on each sign.

iii. Any updates to the public notification procedures in the Spill Emergency Response Plan" intended to provide the public with adequate notification of CSO's and CSS outflows, including appropriate warnings regarding potential exposure and public health hazards to be avoided.

i. **Monitoring to characterize CSO impacts and efficacy of CSO controls.** The Discharger shall submit:

i. A summary of CSO discharge occurrences during the previous storm year (total number of events and frequency, duration, volume and pollutant loadings of each event).

ii. Summary of water quality data collected during the previous storm year for impacted receiving water bodies.

iii. Summary of receiving water impacts during the previous storm year (e.g., beach closings, floatable material wash-ups, fish kills) as a result of any discharge from Discharge Points 002 through 007.

iv. If requested in writing by the Central Valley Regional Board, a summary of any violations that have occurred and the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements shall be included.

5. **Long-Term Control Plan Program Annual Progress Reports.** The Discharger shall prepare and submit annual LTCP progress reports by the due date shown in the Technical Reports Table E-8. The annual LTCP report shall include, at a minimum, the following for the reporting year:

a. Description of overall progress and proposed schedule for action items associated with the LTCP interim and final goals as described in Section VI.C.4.c. of this Order.

b. Status of current on-going CSS improvement and rehabilitation projects initiated in the previous fiscal year or earlier. For each project provide:

i. Type of Project (Rehabilitation and Repair; Inflow and Infiltration Reduction; Storage; Green Pilot Projects)

ii. Date Budgeted/Approved

iii. Date Started (Design and Construction)

vi. Original Planned Completion Date

vii. Construction Completion Date (if applicable, include explanation for any delays from the original planned completion date)

viii. Description of Completed Projects (e.g., plant bar screens need modification due to additional wet weather flows and debris)

c. Planned improvement and rehabilitation projects to be implemented in the upcoming fiscal year. For each project provide:

i. Type of Project (Rehabilitation and Repair; Resiliency; Storage; Outflow Mitigation)

ii. Date Budgeted/Approved

iii. Planned Start Date (Design)

iv. Planned Completion Date

v. Comments

d. **Growth.** The Discharger shall provide updates with each annual progress report addressing the management of additional drainage and sewer flows to the CSS from growth within the CSS service area (e.g., new development and redevelopment) to demonstrate compliance with VI.4.c.iii of the WDRs. The status of the Railyard and River District development projects shall be specifically discussed in the annual reports. The annual updates shall include estimates of the added volume of drainage and sewer flows from growth within the CSS service area and shall discuss how the CSS will be able to manage the increased flows without increasing CSO's and CSS outflows, or reduce the overall percentage of annual flow routed to the SacSewer EchoWater Resource Recovery Facility.

e. **Status of Adaptive Management Plan Implementation.** The Discharger shall provide an annual report detailing the implementation of the Adaptive Management plan of the LTCP. The report shall include progress on the following performance metrics:

i. Goal 1: Protect Public Health

- Summary of reported flooding issues via 311, reported outflows, observed capacity limitations and locations from rain patrol operations, and Discharger response actions
- Summary of system monitoring in prioritized locations based on modeled outflow locations and water level reports from smart cover monitors

ii. Goal 2 & 3: CSS Treatment System & Collection System Assessment and Prioritization

- Progress on H&H model refinements to inform capacity assessments, including evaluation of system monitoring as compared to model results
- Progress on condition assessment program and project prioritization processes
- Comparison of the CSS performance from a similar size storm in the past

iii. Goal 4: Long-Term CSS Resiliency

- 5-Year CIP and progress on prioritized projects
- Evaluation of historical CSS performance for outflows and CSOs through either modeling and/or monitoring

7. **Technical Report Submittals.** This Order includes requirements to submit a ROWD, special study technical reports, progress reports, and other reports

identified in the MRP (hereafter referred to collectively as "technical reports"). The Technical Reports Table E-8 and subsequent table notes below summarize all technical reports required by this Order and the due dates for submittal. All technical reports shall be submitted electronically via CIWQS submittal. Technical reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment.

Table E-8. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
1	Report of Waste Discharge	31 March2030	MRP X.D.1 (ROWD)
2	Analytical Methods Report	**30 June 2026**	MRP X.D.2
3	Analytical Methods Report Certification	**30 January 2027**	MRP IX.E.2.
4	Phase 1 Methylmercury Control Study Work Plan	Complete	WDR VI.C.7.a
5	Implement Phase 1 Methylmercury Control Study Work Plan	Complete	WDR VI.C.7.a
6	Mercury Control Program Annual Progress Report (see table note)	30 January 2026	WDR VI.C.7.a
7	Mercury Control Program Annual Progress Report (see table note)	30 January 2027	WDR VI.C.7.a
8	Mercury Control Program Annual Progress Report (see table note)	30 January 2028	WDR VI.C.7.a
9	Mercury Control Program Annual Progress Report (see table note)	30 January 2029	WDR VI.C.7.a
10	Mercury Control Program Annual Progress Report (see table note)	30 January 2030	WDR VI.C.7.a
11	Final Phase 1 Methylmercury Control Study	Complete	WDR VI.C.7.a
12	Implement Methylmercury Control Programs	To Be Determined	WDR VI.C.7.a
13	Notification of Full Compliance Signed by Legally Responsible Official (LRO)	31 December 2030	WDR VI.C.7.a
14	Nine Minimum Controls Annual Progress Report	30 January 2026	MRP X.D.4
15	Nine Minimum Controls Annual Progress Report	30 January 2027	MRP X.D.4
16	Nine Minimum Controls Annual Progress Report	30 January 2028	MRP X.D.4
17	Nine Minimum Controls Annual Progress Report	30 January 2029	MRP X.D.4

Report #	Technical Report	Due Date	CIWQS Report Name
18	Nine Minimum Controls Annual Progress Report	30 January 2030	MRP X.D.4
19	Long-Term Control Plan Annual Progress Report	30 January 2026	MRP X.D.5
20	Long-Term Control Plan Annual Progress Report	30 January 2027	MRP X.D.5
21	Long-Term Control Plan Annual Progress Report	30 January 2028	MRP X.D.5
22	Long-Term Control Plan Annual Progress Report	30 January 2029	MRP X.D.5
23	Long-Term Control Plan Annual Progress Report	30 January 2030	MRP X.D.5

Table E-8 Note:

1. The Discharger shall submit annual progress reports on the previously submitted pollution prevention plan for mercury. The progress reports shall discuss the effectiveness of the pollution prevention plan in the reduction of mercury in the discharge, include a summary of mercury and methylmercury monitoring results, and discuss updates to the pollution prevention plan.

ATTACHMENT F – FACT SHEET

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Tables

ATTACHMENT F – FACT SHEET

As described in section II.C of this Order, the Central Valley Water Board incorporates this Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this Order. This Fact Sheet discusses the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1 Facility Information

Waste Discharge ID:	5A340114001
CIWQS Facility Place ID:	215236
Discharger:	City of Sacramento
Name of Facility:	Combined Wastewater Collection and Treatment System
Facility Address:	1395 35th Avenue
Facility City, State Zip:	Sacramento, CA 95822
Facility County:	Sacramento County
Facility Contact, Title and Phone Number:	Dalia Fadl, Director, Dept of Utilities, (916) 808-3765
Authorized Person to Sign and Submit Reports:	Dalia Fadl, Director, Dept of Utilities, (916) 808-3765
Mailing Address:	Same as Facility Address
Billing Address:	Same as Facility Address
Type of Facility:	Combined Sewer System (CSS)
Major or Minor Facility:	Major
Threat to Water Quality:	1
Complexity:	A
Pretreatment Program:	Not Applicable (Note: The pretreatment program for indirect users that discharge to the City's CSS is implemented by the Sacramento Area Sewer District)
Recycling Requirements:	Not Applicable
Facility Permitted Flow:	380 million gallons per day (MGD) of treated flow
Facility Design Flow:	380 MGD of treated flow

Watershed:	Sacramento-San Joaquin Delta
Receiving Water:	Sacramento River
Receiving Water Type:	Inland Surface Water

A. The City of Sacramento (hereinafter Discharger) is the owner and operator of the Combined Wastewater Collection and Treatment System (hereinafter Facility), a Combined Sewer System (CSS) that collects and treats domestic and industrial wastewater and storm runoff.

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

B. The Facility discharges treated and untreated combined wastewater and storm runoff to the Sacramento River, a water of the United States, within the Sacramento-San Joaquin Delta. The Discharger was previously regulated by Order R5-2020-0039 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079111 adopted on 14 August 2020 and expires on 30 September 2025. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. When applicable, state law requires dischargers to file a petition with the 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 any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.

D. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on 27 September 2024. A site visit was conducted on 2 October 2024, to observe operations and discuss requirements for waste discharge. Supplemental information was requested on 10 July 2025 and received on 11 August 2025 to provide more information to incorporate the Adaptive Management Strategy into the LTCP. The application was deemed complete on 15 December 2024.

E. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. Under 40 C.F.R. section 122.6(d), States authorized to administer the NPDES program may administratively continue State-issued permits beyond their expiration dates until the effective date of the new permits, if State law allows it. Pursuant to California Code of Regulations (CCR), 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 federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The Discharger owns and operates a CSS that conveys domestic and commercial wastewater and storm water runoff from approximately 7,500 acres (approximately 280 miles of sewer pipe) in downtown Sacramento, East Sacramento, and Land Park areas. The Discharger also owns and operates a separate sanitary sewer system that conveys domestic and commercial wastewater. Approximately 3,800 acres (approximately 78 miles of sewer pipe) of the separated sanitary sewer system surrounding the CSS to the north, east, and south, contributes flows to the CSS. This portion of the separated system is regulated under separate State Water Board Order No. 2022-0103-DWQ, Statewide General WDRs for Sanitary Sewer Systems. are routed to the Sacramento Area Sewer District's (SacSewer) EchoWater Resource Recovery (EchoWater Facility) for tertiary treatment prior to discharge to the Sacramento River. The population served is based on a total population of 535,000 estimated by the United States Census Bureau for the City of Sacramento. The combined sewer system provides sewer service to 20% of the geographic area. It is estimated based on census tract level data that the CSS services approximately 140,000 people.

A. Description of Wastewater and Biosolids Treatment and Controls

Facility Overview: The Facility consists of four main complexes to manage the collected combined sewage: Sumps 1/1A, Sumps 2/2A, the Pioneer Reservoir Treatment Plant (Pioneer Reservoir), and the Combined Wastewater Treatment Plant (CWTP). The CSS conveys domestic and industrial wastewater and storm runoff to Sumps 2/2A, where up to 60 MGD of flow is pumped via the Regional Force Main and City Interceptor to SacSewer's Echowater Facility for tertiary treatment prior to discharge to the Sacramento River.

When flow to Sumps 2/2A exceeds 60 MGD, in system storage begins and, depending on the storm intensity and duration, flows may be routed to the CWTP (7 million gallons of storage capacity in the CWTP and approximately 2.5 million gallons of storage in the CWTP Force Main) and/or Pioneer Reservoir (23 million gallons of storage capacity in the Pioneer Reservoir and 5 million gallons of storage capacity in the Pioneer Interceptor). When the CWTP has optimized storage, flows continue to be sent to the Pioneer Reservoir for primary treatment (including sedimentation and floatables removal, and disinfection using sodium hypochlorite) of up to 250 MGD and, after dechlorination (using sodium bisulfite), discharge to the Sacramento River at Discharge Point 006 and/or sent via the CWTP Force Main to the CWTP. In the CWTP, an additional 130 MGD of combined wastewater receives primary treatment (including sedimentation and floatables removal, and disinfection using sodium hypochlorite) and, after dechlorination (using sodium bisulfite), discharges to the Sacramento River at Discharge Points 002 or 003. The CWTP basins may also be used for storage of up to 9.5 million gallons (including the CWTP Force Main) of flow and diversion of flows back to the SRWTP. During major storms, Sumps 1/1A/1B can also pump up to 200 MGD of flow to Pioneer Reservoir. Collected sludge from the CWTP and Pioneer Reservoir is sent to the SRWTP.

During extreme high flow conditions after treatment has been maximized at Pioneer Reservoir and the CWTP, discharges of untreated combined wastewater may occur at Sump 2/2A through Discharge Points 004 and 005 and at the Sump 1/1A Pioneer Bypass at Discharge Point 007. Each of the six permitted combined sewer overflow (CSO) Discharge Points (002 through 007) discharge directly to the Sacramento River.

The Facility also includes several remote storage facilities at strategic locations within the CSS to minimize the potential for localized flooding and outflows. The table below summarizes the Discharger's remote storage facilities. In addition to these designated storage facilities, the collection system is oversized to provide in-line storage throughout the service area.

Table F-2. CSS Remote Storage Facilities

Remote Storage Facility	Location	Capacity (Million Gallons)
42nd Street (Sump 77)	42nd Street and R Street	1.5
Medical Center (Sump 78)	49th Street and V Street	2.8
Tahoe Broadway (In-Line)	Broadway Blvd and Tahoe Park	1.5
Land Park (In-Line)	North of City Zoo	0.4
U&S Parallel Sewer	East of Sump 1 and 1A	0.4
Oak Park Regional Storage Facility	8th Avenue and San Carlos Way	4
McKinley Water Vault	McKinley Park	6.6

Long Term Control Plan (LTCP): In the 1980s and early 1990s it was recognized that the combined stormwater and sewage system in downtown Sacramento posed health and safety problems beyond the periodic discharge of poorly treated or untreated sewage to the Sacramento River. Wet weather flooding was occurring within the City, either because combined system pipes were inadequate to drain away local runoff, or because those pipes were already filled to capacity by upstream runoff and there was nowhere for local runoff to go. Most seriously, at times upstream storm water and sewage would so overload the piping that the combined storm water and raw sewage would flow out of storm water inlets, flooding streets, yards, houses and commercial establishments with combined storm water and sewage.

The Central Valley Water Board initiated discussions with the Discharger and subsequently enforcement actions concerning the environmental and public health concerns associated with both the discharge to the Sacramento River and the outflow of sewage from the combined system pipes into the City. The initial discussions assumed that separate sewer and storm water systems would need to be constructed, but after considerable study, the City proposed enhancements to the combined system rather than construction of separate systems. Costs to separate the system have been evaluated and found to be much greater than costs to enhance the system. The Central Valley Water Board, after careful consideration and hearings, accepted and approved the Discharger's proposal to enhance the combined system. The general areas of improvement were:

- Increased storage of combined system wastewater prior to discharge to the Sacramento River to capture the maximum volume of water feasible during wet weather events to optimize the pumping of combined system wastewater to the SRWTP.
- Improved pumping, piping and controls to allow maximum use of the increased wastewater storage.
- Improved treatment of combined system wastewater discharges to the Sacramento River.
- Selective replacement of bottlenecks in the combined system piping to provide adequate drainage for storm water and prevention of local flooding and sewage outflows.
- At locations where increased piping size alone would not eliminate flooding and outflows, storage volume was provided within the collection system to hold peak flows. This also increased the overall storage of the combined system, reducing discharges to the Sacramento River.
- Development of a hydraulic model of the combined system to allow identification of projects to optimize the system.
- Commitment of minimum annual expenditures for combined system improvements.

The advantages of enhancing the combined system over construction of separate systems included:

- Elimination of all dry weather discharges and most wet weather discharges of storm water to the Sacramento River from the combined system area. If a separate storm water system was constructed, the collected urban runoff and storm water would presumably be discharged untreated to the Sacramento River, rather than being treated at the EchoWater Facility to tertiary treatment standards.
- Reduction in flooding in the downtown area. The existing piping was not adequate to handle storm water flows, so would need to be replaced with larger piping and pumping facilities in many areas. The existing piping was also not well designed to handle only sewage, and would need significant improvement if the existing piping was to carry only sewage. It appeared that, in parts of the City, two new piping systems would need to be constructed.
- If a separated system was to be constructed, piping would need to be modified in essentially every street throughout the CSS service area, causing major disruption of traffic and safety issues for years. Enhancement of the existing combined system required construction in more limited areas of the City.

The U.S. EPA CSO Control Policy requires implementation of a Long-Term Control Plan (LTCP) to comply with water quality-based requirements of the Clean Water

Act. The ultimate goal of the LTCP has been to alleviate outflows and flooding in the CSS area during a 10-year storm event and to prevent structure flooding during a 100-year storm event. In July 1995, the Discharger adopted the Combined Sewer System Improvement Plan (CSSIP) which constituted the Discharger's LTCP. The CSSIP is a legacy requirement from a 1990 Regional Water Board Cease and Desist Order (CDO) that required the City to cease and desist from discharging waste contrary to requirements and implement a plan to address outflows. The Discharger has made multiple updates to the original 1995 CSSIP and now implements the 2024 LTCP in compliance with the CSO Control Policy requirement. The interim goals established in the 1995 CSSIP were as follows:

- Obtaining protection from a 5-year storm in the six areas of worst flooding (including downtown, north of Capital park; U.C. Medical Center area; immediately south of Highway 80 between Riverside and Freeport; the area northeast of Highway 99 and Highway 80 interchange; the area northwest of Highway 99 and Highway 80 interchange, and the Land Park area),
- Obtaining protection from a 5-year storm throughout the combined sewer system area,
- Obtaining protection from a 10-year storm in the six areas of worst flooding, and then
- Obtaining the goal of protection from a 10-year storm event throughout the combined sewer system.

The Discharger's program is based on the presumption approach. This approach is defined in the U.S. EPA CSO Control Policy as a "…*program that meets any of the criteria listed below would be presumed to provide an adequate level of control to meet the water quality-based requirements of the CWA, provided the permitting authority determines that such presumption is reasonable in light of the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas described above. These criteria are provided because data and modeling of wet weather events often do not give a clear picture of the level of CSO controls necessary to protect WQS [*Water Quality Standards*]"*.

The performance criteria for the presumption approach option selected by the Discharger specifies the elimination or the capture for treatment of no less than 85 percent by volume of the combined sewage collected in the CSS during precipitation events (days with at least 0.1" of rainfall in previous 24 hour period*)* on a system-wide annual average basis. In addition, CSO's remaining after implementation of the Nine Minimum Controls and that is captured for treatment should receive a minimum of:

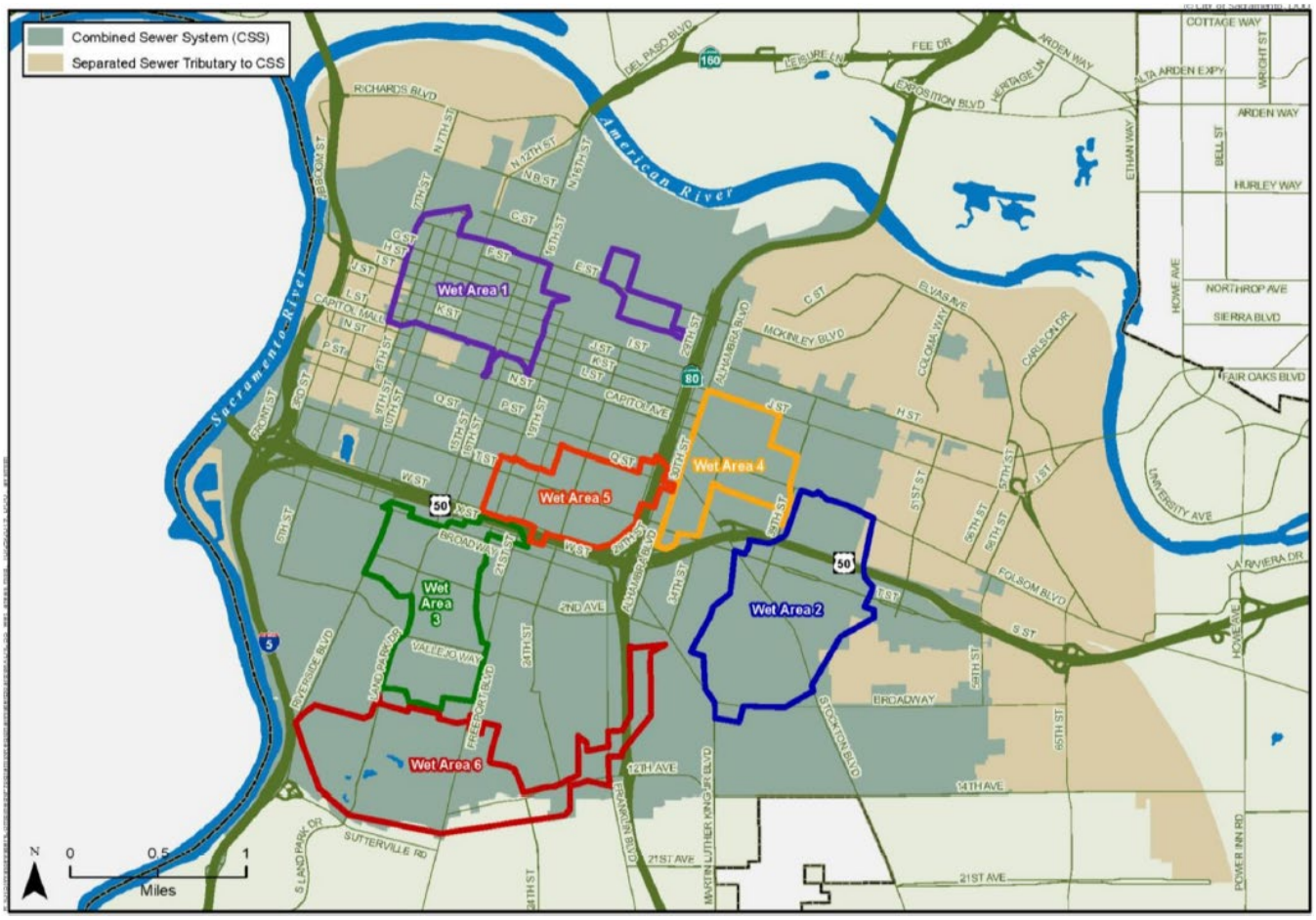
- Primary clarification (removal of floatables and settleable solids may be achieved by any combination-of treatment technologies or methods that are shown to be equivalent to primary clarification);

- Solids and floatables disposal; and
- Disinfection of effluent, if necessary, to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals, where necessary.

The first phase of the 1995 CSSIP concluded that increasing the pumping capacities of Sumps 1/1A and 2/2A concurrent with rehabilitation of the CSS and development of local storage projects, was the most cost-effective approach for reducing flooding and outflows from the CSS. Order R5-2015-0045 required the Discharger to update its CSSIP while continuing implementation. The updated CSSIP was submitted in 2018 and renamed as the Discharger's LTCP, and a revision was submitted in 2019 with the ROWD.

The 2014 CSSIP update identified 28 projects and three programs that were prioritized based on considerations such as flood-reduction benefits, cost effectiveness, ensuring no increase in untreated discharges, sewer condition/age, cost sharing opportunities, and City/community interests.

The 2018 LTCP update evaluated the CSS impacts on water quality per the CSO Policy and the 1995 LTCP Guidance Manual. The 2013 WQA concluded that the infrequent and short duration of CSS overflow discharges and pollutant loadings do not impact applicable receiving water beneficial uses; therefore, the recommended plan as presented in the LTCP targets reducing CSS outflows in specific flooding areas as described in the interim goals. The six areas of worst flooding (referred to as wet areas), as confirmed with the City's hydrologic and hydraulic (H&H) modeling, were identified in the 1995 CSSIP and are shown in the figure below. Model enhancements have been made to add physical network representation details within the six wet areas to improve the accuracy of the model and improve the understanding of flooding:



The City's 2018 LTCP presented the prioritized projects and programs with a schedule for completing the Top 20% of Projects identified in the 2014 CSSIP and the goal of reducing outflows by using flooding protection goals as a proxy for outflow reductions. The Top 20% of Projects included six capital improvement projects within the collection system.

- 2018 LTCP Phase 1 Completed Projects:
  - Existing System Optimization Project, which included the Tahoe Park/Broadway Parallel Sewer Project and East End Relief Sewer Tie-in Project.
  - Project 3-1 (Freeport Sewer Improvement – Bidwell and Freeport
  - Project 1-3 (9th Street Sewer Replacement from G to L Street Inline Storage Project (Downtown Sewer Upsizing))
  - Project 4-1&2 (McKinley Park CS Storage Facility)
- 2018 LTCP Phase 1 Near Term Project:
  - Project 1-6 (24th Street Storage)
- 2018 LTCP Remaining Projects:

- Project 5-3 (W and 25th Street Storage) (Phase 1)
- Existing System Optimization Project (Phase 1)

The W and 25th Street Storage Project, was postponed indefinitely due to right-of-way issues presented by Caltrans that have resulted in the project being infeasible to construct. The 2020 NPDES Permit required the LTCP to consider the effects of climate change by updating the H&H model with the latest precipitation data. Further assessment of the remaining 80% projects with the Updated 2024 Design Storm (noted in Section 6.0) indicate that those projects no longer make significant progress towards the desired goal of capturing and storing peak flows from the 10-year, 6-hour design storm.

As the continued predicted increase in rainfall intensities for design storms makes flood reduction more challenging, an adaptive management strategy allows the Discharger to use strategies that focus on the highest priority areas based on confirmed outflow locations rather than using only flooding as a proxy for predicting outflows. The adaptive management strategy starts with implementation of the 2018 LTCP Phase 1 Projects and Pilot Programs outlined above, additional refinement of the H&H model, implementation of smart covers in targeted areas, and refinement of cost estimates. The adaptive management strategy is designed to continuously refine the accuracy and confidence of the tools and information and use the updated tools and information to further analyze, develop, and refine the LTCP once the Phase 1 Projects and Pilot Programs are completed.

B. Discharge Points and Receiving Waters

1. The Facility is located in section 22, T8N, R4E, MDB&M, as shown in Attachment B, a part of this Order.

2. Domestic and industrial wastewater and storm runoff with primary treatment and disinfection is discharged from the CWTP at Discharge Point 002 (38º31.164’ N and 121º 31.440’ W) or 003 (38º 31.397’ N and 121º 31.424’ W) to the Sacramento River, a water of the United States.

3. Untreated domestic and industrial wastewater and storm runoff from Sumps 2and 2A is discharged at Discharge Points 004 (38º 32.869’ N and 121º 30.622’W) or 005 (38º 32.864’ N and 121º 31.623’ W) to the Sacramento River, a water of the United States.

4. Domestic and industrial wastewater and storm runoff with primary treatment and disinfection is discharged from the Pioneer Reservoir at Discharge Point006 (38º 34.308’ N and 121º 30.800’ W) to the Sacramento River, a water of the United States.

5. Untreated domestic and industrial wastewater and storm runoff from Sumps 1and 1A is discharged at Discharge Point 007 (38º 34.322’ N and 121º 30.786’W) to the Sacramento River, a water of the United States.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order R5-2020-0039 for discharges from Discharge Points 002, 003, and 006 (Monitoring Location EFF-002, EFF-003, and EFF-006) and representative monitoring data from the term of Order R5-2020-0039 are as follows:

Table F-3 Historic Effluent Limitations

Parameter	Units	Historic Effluent Limitations	EFF-002 Highest Discharge	EFF-006 Highest Discharge
Total Suspended Solids (TSS)	mg/L	Storm Year Average (SYA) - 100	SYA 86	SYA 112
Settleable Solids	ml/L	Maximum Daily – 1.0	MAX 0.1	MAX 0.25
Chlorine, Total Residual	mg/L	Maximum Daily – 0.019	MAX 0	MAX 0
pH	Standard units	Instantaneous Min - 6.0 Instantaneous Max - 8.5	MIN 6.1 MAX 8.5	MIN 6.2 MAX 7.0

Table F-3 Notes:

1. **Storm Year Average.** A storm year is defined as 1 October through 30 September of the following year.
2. **Total Suspended Solids.** In addition to storm year average effluent limit, two consecutive samples shall not exceed 150 mg/L.
3. **Total Suspended Solids and Settleable Solids.** Effluent limits are applicable to Discharge Point 006 (Pioneer Reservoir) for flows of 250 MGD or less and for all flows from Discharge Points 002 and 003.

D. Compliance Summary

The Central Valley Water Board has not issued Administrative Civil Liability (ACL) Complaints under Order R5-2020-0039.

E. Planned Changes – none

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (Pub. Res Code, § 21100 et seq.). This Order contains receiving water limitations for toxicity which are based solely on state law. The imposition of these requirements is exempt from the procedural requirements of CEQA pursuant to 14 CCR section 15061(b)(3) because it can be seen with certainty that there is no possibility that these requirements may have a significant effect on the environment.

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

1. **Water Quality Control Plan.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.

   a. Basin Plan. The Central Valley Water Board adopted a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition, February 2019 (hereinafter Basin Plan) that 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, the Basin Plan 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. Beneficial uses applicable to Sacramento River are as follows:

Table F-4 Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002, 003, 004, 005, 006, and 007	Sacramento River	Existing: Municipal and domestic supply (MUN); agricultural supply, including stock watering (AGR); industrial process supply (PROC); industrial service supply (IND); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater aquatic habitat (WARM); cold freshwater aquatic habitat (COLD); warm migration, cold migration of aquatic organisms (MIGR); warm spawning , reproduction, and/or early development (SPWN); wildlife habitat (WILD); and navigation (NAV)

   b. **Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.** The Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) was adopted by the State Water Resources Control Board (State Water Board) on 1 December 2020, under authority provided by

Water Code sections 13140 and 13170. Except as otherwise indicated, this ISWEBE Plan establishes provisions for toxicity, water quality and sediment quality that apply to all inland surface waters, enclosed bays, and estuaries and coastal lagoons of the state, including both waters of the United States and surface waters of the state.

c. **Bay-Delta Plan.** The Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) was adopted in May 1995 by the State Water Board superseding the 1991 Bay-Delta Plan. The Bay-Delta Plan identifies the beneficial uses of the estuary and includes objectives for flow, salinity, and endangered species protection.

The State Water Board adopted Decision 1641 (D-1641) on 29 December 1999 and revised on 15 March 2000. D-1641 implements flow objectives for the Bay-Delta Estuary, approves a petition to change points of diversion of the Central Valley Project and the State Water Project in the Southern Delta, and approves a petition to change places of use and purposes of use of the Central Valley Project. The water quality objectives of the Bay-Delta Plan are implemented as part of this Order.

d. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on 7 January 1971 and amended this plan on 18 September 1975. This plan contains temperature objectives for surface waters. For the purposes of the Thermal Plan, the discharges are considered to be an Existing Discharge of Elevated Temperature Waste to an Estuary, as defined in the Thermal Plan. The applicable water quality objective in Section 5.A(1) of the Thermal Plan are as follows:

i. The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.
ii. Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.
iii. No discharge shall cause a surface water temperature to rise greater than 4°F above the natural temperature of the receiving waters at any time or place.
iv. Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

Requirements of this Order implement the Thermal Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995

and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain federal water quality criteria for priority pollutants.

3. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005, that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. The SIP states that it "…*does not apply to discharges of toxic pollutants from combined sewer overflows. These discharges will continue to be regulated in accordance with the federal "Combined Sewer Overflow (CSO) Control Policy*," published April 19, 1994 (59 FR 18688-18698)."

4. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") (State Anti-Degradation Policy). The State Anti-Degradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Anti-Degradation Policy requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy. The Board finds this order is consistent with the Federal and State Water Board antidegradation regulations and policy.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 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 must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Domestic Water Quality.** In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption,

cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels (MCLs) designed to protect human health and ensure that water is safe for domestic use.

7. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 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 The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

8. **U.S. EPA Combined Sewer Overflow (CSO) Control Policy.** On 11 April1994, U.S. EPA adopted the Combined Sewer Overflow (CSO) Control Policy (59 FR 18688-18698). The CSO Control Policy was incorporated into the federal CWA by the Wet Weather Water Quality Act of 2000 [House Resolution (H.R.) 828] which is part of H.R. 4577, an omnibus funding bill. The CWA at Section 402(q)(1) states: "…Each permit…pursuant to this Act…for a discharge from a municipal combined storm and sanitary sewer shall conform to the CSO Control Policy…" The CSO Control Policy establishes a consistent national approach for controlling discharges from CSO's to the nation's water through the NPDES permit program. CSO's, for the purposes of this Order, are defined as authorized discharges to the Sacramento River from the CSS in accordance with this Order at Discharge Point(s) 002, 003, 004, 005, 006, and/or 007. A discharger's long-term CSO control plan includes the design and construction of additional facilities which constitute the CSO controls envisioned by the CSO Control Policy.

   The CSO Control Policy initiates a two-phased process with higher priority given to more environmentally sensitive areas. During the first phase, the Discharger is required to implement the nine minimum controls (NMC's) and develop a long-term control plan. NMC's constitute the technology-based requirements of the CWA as applied to combined sewer facilities: best practicable control technology currently available (BPT), best conventional pollutant control technology, (BCT), and best available technology economically achievable (BAT) based on the permit writer's best professional judgment (BPJ). These NMC's can reduce the frequency of CSO's and reduce their effects on receiving water quality. During the second phase, the Discharger is required to implement a long-term CSO control plan and continue implementation of the NMC's. The long-term CSO control plan includes the design and construction of additional facilities which constitute the CSO controls envisioned by the CSO Control Policy. In addition, the Discharger is required to continue the implementation of the NMC's, properly operate and maintain the completed CSO controls in accordance with the operational plan and continue to implement the post-construction monitoring program (e.g., CSO monitoring).

9. **Water Code sections 13263 and 13241.** Water Code section 13263 requires that, in establishing waste discharge requirements, regional water quality control boards consider beneficial uses to be protected, water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of section 13241. The Central Valley Water Board considered these factors with respect to the requirements of this Order that are based solely in state law**.**

D. Impaired Water Bodies on CWA 303(d) List

1. Under section 303(d) of the 1972 CWA, states, territories, and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 6 April 2018 U.S. EPA gave final approval to California's 2014 – 2016 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "…those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 C.F.R. part 130, et seq.)." The Basin Plan also states, "Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." The listing for the Sacramento River (Delta Waterways, northern portion) includes chlordane, chlorpyrifos, DDT, diazinon, dieldrin, Group A pesticides, invasive species, mercury, PCB's (polychlorinated biphenyls), and unknown toxicity. Of these parameters, only chlorpyrifos and diazinon are listed based on urban runoff/storm sewer sources.

2. Total Maximum Daily Loads (TMDLs). Table F-4, below, identifies the 303(d) listings and any applicable TMDLs. This permit includes WQBELs that are consistent with the assumptions and considerations of the applicable waste load allocations (WLAs) in the chlorpyrifos, diazinon, and mercury TMDLs.

Table F-5 303 (d) List for Sacramento River

Pollutant	Potential Sources	TMDL Status
Chlordane	Agriculture	Not Completed
Chlorpyrifos	Agriculture and Urban Runoff/Storm Sewers	Adopted and Effective
DDT	Agriculture	Not Completed
Diazinon	Agriculture and Urban Runoff/Storm Sewers	Adopted and Effective
Dieldrin	Agriculture	Not Completed
Group A Pesticides	Agriculture	Not Completed
Invasive Species	Unknown	Not Completed
Mercury	Resource Extraction	Adopted and Effective
PCBs	Unknown	Not Completed

Pollutant	Potential Sources	TMDL Status
Unknown Toxicity	Unknown	Not Completed

3. The 303(d) listings and TMDLs have been considered in the development of the Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in Section IV.C.3 of this Fact Sheet.

E. Other Plans, Polices and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33U.S.C., section 1311(b)(1)(C); 40 C.F.R. section 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to federal regulations, 40 C.F.R. section122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality." Federal regulations, 40 C.F.R. section 122.44(d)(1)(vi),further provide that "[w]here 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 contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the 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 in the Code of Federal Regulations: 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 the receiving water where numeric water quality objectives have not been established. The Basin Plan at page 4-27, contains an implementation policy, "Policy for Application of Water Quality Objectives", that specifies that the Central Valley Water Board "will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives." This Policy complies with 40 C.F.R. section 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria

(i.e., the Central Valley Water Board's "Policy for Application of Water Quality Objectives")(40 C.F.R. section 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at section 3.1.20) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents' objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "…water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)" in Title 22 of CCR. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs. The narrative tastes and odors objective states: "Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at CFR section122.41(m)(4)).** As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal regulations, 40 C.F.R. section 122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation. The exception to this Discharge Prohibition is discharges from Discharge Points 002, 003, 004, 005, 006, and 007 in accordance with Discharge Prohibitions III.D and III.E (as described in IV.A.4 and IV.A.5 below).

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance

4. **Prohibition III.D (No discharge of hazardous waste).** This prohibition is based on California Code of Regulations, title 22, section 66261.1 et seq, that prohibits discharge of hazardous waste.

5. **Prohibition III.E (Specified conditions that must be met for discharge from the combined sewer system).** This prohibition is continued from Order R5-2020-0039 and requires (1) full use of the treatment capacity of the Pioneer Reservoir (250 MGD) and the CWTP (130 MGD) prior to discharge from the Sump 2 Bypass (Discharge Points 004 and 005) and/or Sump 1A Bypass (Discharge Point 007); and (2) full use of the storage capacity of the CWTP prior to discharge in excess of the Pioneer Reservoir treatment capacity of 250 MGD from Discharge Point 006.

6. **Prohibition III.F (No discharges except as a result of wet weather unless authorized by the Executive Officer).** This prohibition is continued from Order R5-2020-0039 and prohibits the discharge from Discharge Points 002 through 007 other than as a result of a storm event, or if needed for maintenance or equipment testing after approval by the Executive Officer.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

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

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD_5, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Central Valley Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.Applicable Technology-Based Effluent Limitations.

2. Applicable Technology-Based Effluent Limitations

U.S. EPA establishes some technology-based requirements by issuing industry-wide effluent guidelines. For CSO's, no effluent guidelines have been promulgated for BPT, BCT, or BAT. In the absence of effluent guidelines, the permit writer must use BPJ to determine the level of treatment that BPT, BCT, and BAT represent.

a. **Nine Minimum Controls (NMC's).** According to the U.S. EPA CSO Control Policy, all permits for CSO's should require implementation of the NMC's as a minimum BAT/BCT, established on a BPJ basis. Implementation of the NMC's are required as special provisions in this Order. A discussion of implementation of NMC's by the Discharger to date, as well as the proposed NMC requirements contained in this Order, is provided in Section VI.B.4.b of this Fact Sheet.

b. **Effluent Limits to Monitor Facility Performance.** As described in Section II.A of this Fact Sheet, the Facility provides primary treatment (including sedimentation and floatables removal, and disinfection using sodium hypochlorite) for flows up to 250 MGD in the Pioneer Reservoir and up to 130 MGD in the CWTP. Compliance with technology-based effluent limitations are being used to monitor the treatment performance of the Facility and the effectiveness of the implementation of the U.S. EPA CSO Control Policy NMC's.

i. Order R5-2020-0039 contained effluent limitations for TSS that represent reasonable performance of the sedimentation and floatables treatment processes at the Pioneer Reservoir and CWTP. This Order retains the TSS effluent limitations (100 mg/L storm year average and no two consecutive samples shall exceed 150 mg/L) to monitor the performance of the Pioneer Reservoir and CWTP in removing solids prior to discharge to the Sacramento River.

ii. Order R5-2020-0039 contained effluent limitations for fecal coliform organisms that represent reasonable performance of the Facility disinfection treatment process. This Order retains the fecal coliform organism effluent limitations (not to exceed 1,000 MPN/100 mL in any three consecutive samples and 200 MPN/100 mL as a storm year median) to monitor the performance of the Pioneer Reservoir and CWTP in reducing pathogens prior to discharge to the Sacramento River.

iii. Order R5-2020-0039 contained technology-based effluent limitations for pH (within the range of 6.0 to 8.5 standard units). This Order retains the pH effluent limitations to monitor the performance of the Pioneer Reservoir and CWTP in controlling pH prior to discharge to the Sacramento River.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the 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 for the pollutant, 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 the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

Finally, 40 C.F.R. section 122(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan on page 2-1 states: "Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…" and with respect to disposal of wastewaters states that "...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses."

The federal CWA section 101(a)(2), states: "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983." Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 C.F.R. section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

a. **Receiving Water and Beneficial Uses.** Refer to III.C.1. above for a complete description of the receiving water and beneficial uses.

b. **Effluent and Ambient Background Data.** The 2024 WQA was used as the basis for the data evaluation and analysis of effluent discharge impacts to receiving water quality for this permit term. Data submitted by the Discharger was evaluated for the period of July 2021 through June 2024, which includes effluent and ambient background data submitted in SMRs and the ROWD.

3. Determining the Need for WQBELs

a. Federal and State Requirements for Discharges from CSOs

The State Implementation Policy (SIP) explicitly states that it is not applicable to CSO's. Therefore, the SIP reasonable potential analysis (RPA) procedures are not applicable to this discharge. However, as described further below, the U.S. EPA CSO Control Policy and related guidance suggests the eventual establishment of numeric effluent limitations would be necessary to ensure that CSO's achieve applicable water quality objectives.

Specifically, U.S. EPA's CSO Control Policy (59 FR 18688, 19 April 1994)states that "*CSO permittees … develop long-term CSO control plans which evaluate alternatives for attaining compliance with the CWA, including compliance with water quality standards and protection of designated uses." It further states that, once LTCP's are completed, permittees will be responsible for implementing the plan's recommendations as soon as practicable. The U.S. EPA CSO Control Policy also provides that "…[d] development of the long-term plan should be coordinated with the review and appropriate revision of water quality standards (WQS) and implementation procedures on CSO-impacted receiving waters to ensure that the long-term controls will be sufficient to meet water quality standards" (59 FR 18694).*

b. Status of Long-Term Control Plan (LTCP) Implementation

During the 2020/2021 through 2024/2025 storm years, approximately 95% of the total CSS flow was eliminated by diversion to a POTW (SacSewer's EchoWater Facility) which provides tertiary treatment, and the remaining 5% of CSS flow received primary treatment at Pioneer Reservoir Treatment Plant or Combined Water Treatment Plant. Between 2storm years 2019 and 2024, treated discharges per year ranged from 0 - 9. One untreated discharge occurred over the last 5 years in 2022. Before that, the last untreated discharge was in 2013. The Discharger's efforts have resulted in consistent and significant reductions in dry weather and wet weather flows over the last 20 years. The figure below shows the consistent downward trend and demonstrates that the CSS service area is not generating new flows. Water conservation, new plumbing codes for redevelopment, adaptive management strategies and ongoing collection system improvements as implemented under the LTCP are all factors in this decrease in dry weather flows.

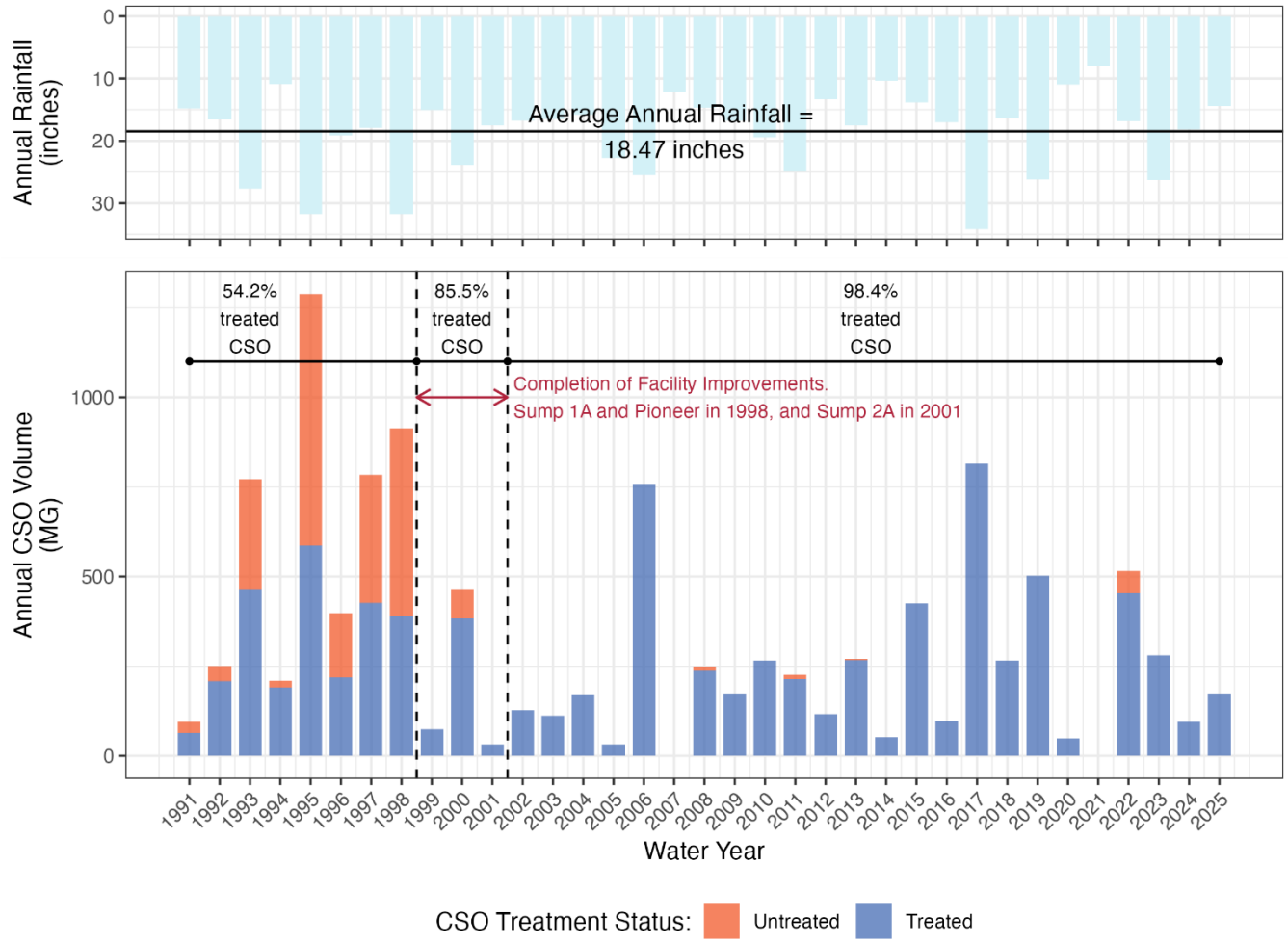


Figure 1. A summary of treated and untreated CSO discharge volumes from 1991 to 2024 compared to the water year type.

c. CSS Rehabilitation and Replacement Efforts

With respect to achieving of the original 1995 interim goals for reduction of CSS outflows and flooding, and consistent with the 1995 CSSIP and subsequent LTCP updates, the Discharger continues to focus on providing peak flow storage and relief for areas susceptible to outflows. The City of Sacramento is nearing completion of the 2018 LTCP Phase I projects with the final project currently in the design phase, and then will move on to Phase 2 projects. The only exception to the final 2018 LTCP Phase 1 project list was the proposed W and 25th Street Storage Project. This project was postponed indefinitely due to right-of-way issues presented by Caltrans that have resulted in the project being infeasible to construct. Examples of select major projects that have been completed or in process over the previous permit cycle are provided in the table below.

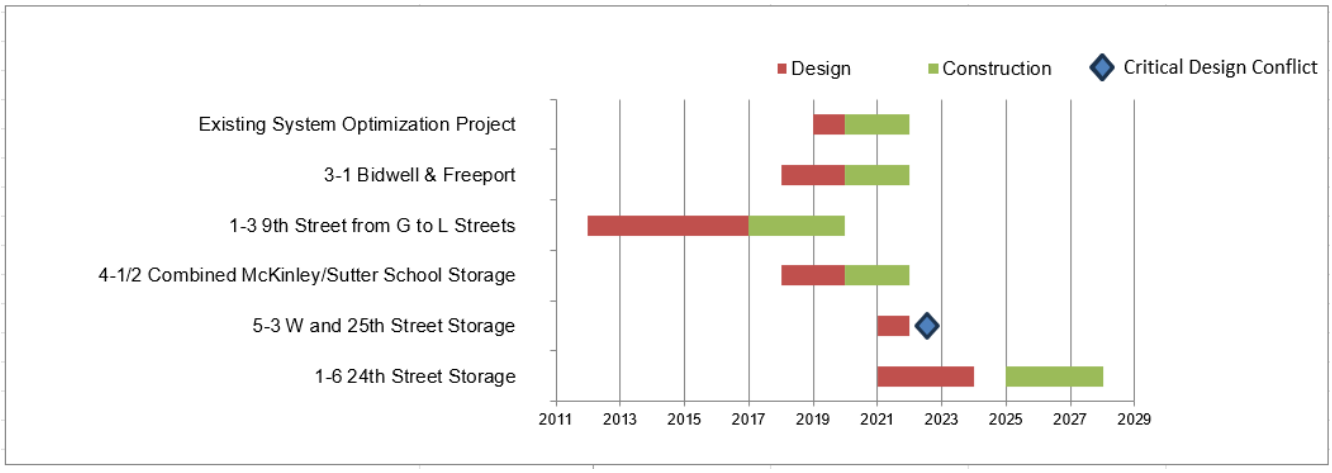


Figure 2. Six major LTCP projects and their completion timelines completed in the previous order's term.

d. Water Quality Assessment (WQA)

The U.S. EPA CSO Control Policy presumes that compliance with performance criteria generally will be sufficient to meet applicable water quality objectives. As described above, the Discharger has selected the presumption approach, and the Discharger's LTCP exceeds the performance specifications. The selected CSO controls should include a post-construction water quality monitoring program adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls (59 Federal Register 18694). The planned control program is designed to allow cost-effective expansion or cost-effective retrofitting if additional controls are subsequently determined to be necessary to meet water quality standards or designated uses (59Federal Register 18693).

The Discharger completed a WQA in 1995 (Effluent and Receiving Water Quality and Toxicity Summary) that demonstrated compliance with water quality-based objectives. However, due to the limited number of parameters assessed, Order R5-2010-0004 and Order 2020-0039 required the Discharger to complete another WQA to evaluate whether implementation of their LTCP under the U.S. EPA CSO Control Policy

presumption approach is ensuring continued compliance with applicable water quality standards and are adequately protecting beneficial uses.

The Discharger submitted the updated WQA in September 2024 (City of Sacramento Combined Sewer System Water Quality Assessment, prepared by Larry Walker Associates) and provided data reporting updates and corrections in February 2025. As part of this assessment, the Discharger performed effluent and receiving water monitoring during periods of overflow discharge to the Sacramento River during the 2020/2021, 2021/2022, 2022/2023 and 2023/2024 storm years, with expanded monitoring in 2022/2023 and 2023/2024.. The WQA is performed using the following steps:

1. CSO Event and Sacramento Hydraulic Characterization - Summarizing the CSO events and associated discharge volumes and collecting water quality samples,
2. Water Quality Characterization - Water quality data are summarized to characterize conditions, including aquatic toxicity and pathogen data.
3. Constituent Screening - CSO and receiving water quality data are compared to applicable water quality objectives for relevant exposure periods. Additional constituents are included as constituents of concern. Some constituents may not be moved forward for quantitative analysis due to a lack of detected data.
4. Assessment of Potential Beneficial Use Impacts - Near field constituent mass assimilative capacity. Hypothetical scenario analysis separating the combined system.

For the pollutant parameters that met the screening criteria for further evaluation, median concentrations were calculated to represent the CSS effluent concentrations. Effluent mass loadings of the pollutant parameters were then estimated using CSS discharge event volumes and the median effluent concentrations. Upstream receiving water mass loadings were calculated using median receiving water concentrations and upstream flow volumes that represented the averaging period for the applicable objective or criterion. In the absence of detected upstream receiving water data sufficient to calculate median detected concentrations, the concentration and mass load were conservatively assumed as an upper limit at the detection limit.

Mass loadings that represent assimilative capacity of the receiving water were calculated using the water quality objective or criterion and upstream flow volumes that represented the averaging period for the applicable objective or criterion (e.g., annual averages for human carcinogen criteria, monthly average for nitrate plus nitrite, and 1-hour average for acute aquatic life criteria).CSS effluent mass discharge loadings were combined with the upstream receiving water mass loadings and then compared to the mass loadings if the receiving water reached full assimilative capacity.

This comparison was designed to place the CSS effluent mass loadings in the context with the total receiving water load observed at the time of a discharge event, as well as with the available assimilative capacity in the receiving water.

In summary, review of the data from the current permit term and the updated WQA submitted in September 2024 indicates the effluent quality has not changed since the 2013 WQA was conducted; therefore, the findings and results of the 2013 WQA remain valid.

e. **Constituents with Total Maximum Daily Load (TMDL).** 40 C.F.R. section 122.44(d)(1)(vii) provides: "When developing water quality-based effluent limits under [section 122.44(d)(1)], the permitting authority shall ensure that: (A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and (B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by U.S. EPA pursuant to [Total Maximum Daily Loads regulations]." U.S. EPA construes 40 C.F.R. section 122.44(d)(1)(vii)(B) to mean that "when WLAs are available, they must be used to translate water quality standards into NPDES permit limits." 54 Fed. Reg. 23868, 23879 (June 2, 1989).

The Sacramento River is subject to TMDLs for Diazinon, Chlorpyrifos, and Mercury and WLAs under those TMDLs are available referenced by name or pollutant/water body and described with adoption and effective dates. The Central Valley Water Board developed WQBELs for these pollutants pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis.

i. **Diazinon and Chlorpyrifos.**

(a) **WQO.** The Central Valley Water Board completed a TMDL for diazinon and chlorpyrifos for the Sacramento River and San Joaquin River Basins and amended the Basin Plan to include diazinon and chlorpyrifos waste load allocations and water quality objectives. The Basin Plan Amendment for the Sacramento River and San Joaquin River Basins for Control of Diazinon and Chlorpyrifos Discharges was adopted by the Central Valley Water Board on 28 March 2014 and became effective on 16 August 2017.

The amendment modified Basin Plan Chapter 3 (Water Quality Objectives) to establish site-specific numeric objectives for diazinon and chlorpyrifos for waters with COLD and/or WARM beneficial uses below major dams and identified the requirements to meet the additive formula already in Basin Plan

Chapter 4 (Implementation) for the additive toxicity of diazinon and chlorpyrifos.

The amendment states that the waste load allocations for all NPDES-permitted dischargers shall not exceed the sum (S) of one (1) as defined below:

$S = Cd/WQOd + Cc/WQOc \leq 1.0$

Where:

Cd = diazinon concentration in µg/L of point source discharge

Cc = chlorpyrifos concentration in µg/L of point source discharge

WQOd = acute or chronic diazinon water quality objective in µg/L

WQOc = acute or chronic chlorpyrifos water quality objective in µg/L

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the sum (S) above, analytical results that are reported as 'non-detectable' concentrations are considered to be zero.

The WLAs apply to waterbodies that are downstream of the major dams in Table 3-5 of the Basin Plan, which includes the Facility discharges to the Sacramento River in The Delta Waterways (Northern Portion).

(b) **WQBELs.** WQBELs for diazinon and chlorpyrifos are required per the TMDL. This Order includes effluent limits calculated based on the WLAs contained in the TMDL, as follows:

Average Monthly Effluent Limitation (AMEL)

$S(AMEL) = Cd\ (M\text{-}avg)/0.079 + Cc\ (M\text{-}avg)/0.012 \leq 1.0$

Where:

Cd(M-avg) = average monthly diazinon effluent concentration in µg/L

Cc (M-avg) = average monthly chlorpyrifos effluent concentration in µg/L

Maximum Daily Effluent Limitation (MDEL)

$S(MDEL) = Cd\ (W\text{-}avg)/0.16 + Cc\ (W\text{-}avg)/0.025 \leq 1.0$

Where:

Cd(W-avg) = maximum daily diazinon effluent concentration in µg/L
Cc (W-avg) = maximum daily chlorpyrifos effluent concentration in µg/L

(c) **Plant Performance and Attainability.** Chlorpyrifos and diazinon were not detected in the effluent between October 2020 and September 2024. Furthermore, since these pesticides have been banned for public use, they are not expected to be present in the influent to the Facility. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

The Discharger, as part of their Public Outreach Program component of their Stormwater Quality Improvement Plan (as required under Municipal Separate Storm Sewer System Order R5-2016-0040), implements a variety of educational stormwater and urban runoff outreach programs. These programs are designed in part to reduce, to the maximum extent practicable, pollutants in stormwater discharges associated with the application of pesticides, herbicides, and fertilizer. As these programs are implemented City-wide, the programs should also assist in reducing the likely presence of diazinon and chlorpyrifos when CSO discharges occur.

ii. **Mercury**

(a) **WQO.** The State Water Board adopted Resolution 2017-0027 on 2 May 2017, which approved Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Statewide Mercury Provisions). The Statewide Mercury Provisions establish a Sport Fish Water Quality Objective of an average 0.2 mg/kg methylmercury fish tissue concentration within a calendar year for waters with the beneficial uses of commercial and sport fishing (COMM), tribal tradition and culture (CUL), wildlife habitat (WILD), and marine habitat (MAR). This fish tissue objective corresponds to a water column concentration of 12 ng/L of total mercury for flowing water bodies (e.g., rivers, creeks, streams, and waters with tidal mixing). As shown in Table F-4, the beneficial uses of The Sacramento River include WILD; therefore, the Sport Fish Water Quality Objective is applicable and is the most stringent objective.

However, the mercury water quality objectives established in the Statewide Mercury Provisions do not supersede the site-specific numeric mercury water quality objectives established in the Basin Plan, and section IV.D.1 of the Statewide Mercury

Provisions specifies that the implementation provisions do not apply to dischargers that discharge to receiving waters for which a mercury or methylmercury TMDL is established pertaining to the same beneficial use or uses. Consequently, this Order continues to implement the Basin Plan's Delta Mercury Control Program for the control of methylmercury in the receiving water.

(b) **Analysis.** Section 1.3 of the SIP states, "*The RWQCB shall conduct the analysis in this section of each priority pollutant with an applicable criterion or objective,* ***excluding priority pollutants for which a TMDL has been developed,*** *to determine if a water quality-based effluent limitation is required in the Discharger's permit."* (emphasis added)

The Discharger is meeting interim limits for total mercury and final limits for methylmercury set by the Delta Mercury Control Program based on data from October 2019 to September 2024.

(c) **WQBELs.** The Basin Plan's Delta Mercury Control Program includes WLA's for POTW's in the Delta, including for the Discharger. This Order contains a final WQBEL for methylmercury based on the WLA. Effective 31 December 2030, the total calendar annual methylmercury load shall not exceed 0.53 grams.

(d) **Plant Performance and Attainability.** A compliance schedule in accordance with the State Water Board's Compliance Schedule Policy and the Delta Mercury Control Program has been established in section VI.C.7.a of this Order. The final WQBEL's for methylmercury are effective 31 December 2030.

f. **Other Constituents of Concern.** Since CSOs are not subject to the SIP RPA procedures, alternate analyses were used to evaluate reasonable potential for CSO discharges to impact receiving water beneficial uses. Central Valley Water Board staff conducted analyses for nearly 200 constituents, including the 126 U.S. EPA priority toxic pollutants. WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential to cause or contribute to an instream excursion of an applicable water quality objective; however, monitoring for those pollutants is established in this Order. If the results of effluent monitoring demonstrate that CSO discharges are causing exceedances of applicable water quality objectives, this Order may be reopened and modified by adding an appropriate effluent limitation.

i. **Chlorine Residual**

(a) **WQO.** U.S. EPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively.

These criteria are protective of the Basin Plan's narrative toxicity objective.

(b) **Analysis.** The concentrations of chlorine used to disinfect wastewater are high enough to harm aquatic life and violate the Basin Plan narrative toxicity objective if discharged to the receiving water. Therefore, effluent limits are required.

The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. Although the Discharger uses a sodium bisulfite process to dechlorinate the effluent prior to discharge to Sacramento River, the existing chlorine use and the potential for chlorine to be discharged provides the basis for the discharge to have a reasonable potential to cause or contribute to an instream excursion above the NAWQC.

(c) **Effluent Limitations.** The U.S. EPA's TSD for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, Consistent with Order R5-2015-0045 and R5-2020-0039, and due to the infrequent and short-term nature of CSO discharges from the Facility, the chlorine residual maximum daily effluent limit (0.019 mg/L) will be carried over to this Order. This effluent limitation will apply to discharge from Discharge Points 002 (CWTP), 003 (CWTP Sump 104) and 006 (Pioneer Reservoir).

(d) **Plant Performance and Attainability.** Chlorine Residual was not detected in the effluent between October 2020 and September 2024. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

ii. **Pathogens**

(a) **WQO.** DDW has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL, at any time.

Title 22 is not directly applicable to surface waters; however, the Central Valley Water Board finds the stringent disinfection criteria are appropriate since the undiluted effluent may be used

for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens.

(b) **Analysis.** The 2024 WQA required an evaluation of compliance with the new Statewide Bacteria Objectives for *Escherichia coli* (*E. coli*) in the Sacramento River. The Water Quality Assessment Work Plan (Appendix B) includes an assessment of the presence of pathogens near to the Freeport Regional Water Authority (FRWA) diversion point on the Sacramento River. The Sacramento River at Garcia (RSW-Garcia) site was used to best characterize this MUN beneficial use as the RSW-Garcia monitoring location is 0.6 miles upstream of the FRWA intake. Based on paired sign tests, there is no statistically significant difference between the upstream and downstream *Cryptosporidium* or *Giardia* counts, suggesting that CSOs do not cause or contribute to changes in Sacramento River *Cryptosporidium* concentrations.

iii. **pH**

(a) **WQO.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "pH shall not be depressed below 6.5 nor raised above 8.5." However, Order R5-2020-0039 included effluent limitations for pH of 6.0 as an instantaneous minimum and 8.5 as an instantaneous maximum which have been retained in this Order.

(b) **Analysis.** The effluent pH ranged from 6.1 to 6.9 while the upstream receiving water pH ranged from 6.1 to 7.5. The pH in the discharge exceeds the Basin Plan water quality objective, therefore the effluent has the reasonable potential to cause or contribute to an instream excursion above the objective.

Low pH values may be due in part to the addition of chemicals to ensure proper chlorination and dichlorination. In addition, the Discharger previously provided as part of e-SMR submittals, pH data for the influent to the Facility at levels consistently below 6.5 standard units that may also contribute to the low pH values in the effluent. However, the downstream pH was always in compliance with the applicable Basin Plan objectives (i.e., within the range of 6.5 – 8.5).

(c) **Effluent Limitations.** Effluent limitations for pH of 6.0 as an instantaneous minimum and 8.5 as an instantaneous maximum are included in this Order based on the protection of the Basin Plan objectives for pH. Based on the data and information previously provided by the Discharger, excursions below the Basin Plan's pH water quality objective of 6.5 do not have the

reasonable potential to cause exceedances of downstream receiving water quality objectives. Therefore, technology-based effluent limits for pH of 6.0 as an instantaneous minimum and 8.5 as an instantaneous maximum have been retained from the previous Order to ensure the Facility is operated properly.

(d) **Plant Performance and Attainability.** The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. **Settleable Solids**

(a) **WQO.** For inland surface waters, the Basin Plan states that "water shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."

(b) **Analysis.** The discharge of combined stormwater and wastewater has a reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative objective for settleable solids.

(c) **Effluent Limitations.** This Order contains average monthly and average daily effluent limitations for settleable solids. Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order. A daily maximum effluent limitation for settleable solids is included in the Order, in lieu of a weekly average, to ensure that the treatment works operate in accordance with design capabilities.

(d) **Plant Performance and Attainability.** Settleable Solids were detected in the effluent during two sampling events and five samples conducted between October 2020 and September 2024. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

v. **Temperature**

(a) **WQO.** The Thermal Plan requires that, "The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F."

(b) **Analysis.** Treated domestic wastewater is an elevated temperature waste, which could cause or threaten to cause the receiving water temperature to exceed temperature objectives established in the Thermal Plan. Therefore, effluent limitations are required.

The Facility is a CSS that treats domestic wastewater and stormwater, which is an elevated temperature waste. This provides the basis for the discharge to have the reasonable

potential to cause or contribute to an excursion above Thermal Plan requirements.

(c) **Effluent Limitations.** To ensure compliance with the Thermal Plan, an effluent limitation for temperature is included in this Order.

(d) **Plant Performance and Attainability.** The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

vi. **Salinity**

(a) **WQO.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, and chloride. The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for electrical conductivity, total dissolved solids, and sulfate. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-6, below, contains various recommended levels for EC or TDS, sulfate, and chloride.

Table F-6 Salinity Water Quality Criteria/Objectives

Parameters	Secondary MCL Recommended Level.	Secondary MCL Upper Level	Secondary MCL Short-term Maximum	U.S. EPA NAWQC	Maximum Calendar Annual Average Effluent Concentration	Maximum Daily Effluent Concentration
EC (µmhos/cm) or TDS (mg/L)	EC 900 or TDS 500	EC 1,600 or TDS 1,000	EC 2,200 or TDS 1,500	N/A	EC 251 or TDS 130	EC 382 or TDS 130
Sulfate (mg/L)	250	500	600	N/A	12	12
Chloride (mg/L)	250	500	600	860 1-hour /	30	30

Parameters	Secondary MCL Recommended Level.	Secondary MCL Upper Level	Secondary MCL Short-term Maximum	U.S. EPA NAWQC	Maximum Calendar Annual Average Effluent Concentration	Maximum Daily Effluent Concentration
				230 4-day		

Table F-6 Notes:

1. **Agricultural Water Quality Objectives.** Applicable agricultural water quality objectives vary. Procedures for establishing the applicable numeric limitation to implement the narrative chemical constituent objective can be found in the Policy for Application of Water Quality Objectives, section 4.2.2.1.9 of the Basin Plan. However, the Basin Plan does not require improvement over naturally occurring background concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable water quality objective, the natural background concentration will be considered to comply with the objective.
2. **Secondary MCLs.** Secondary MCLs are for protection of public welfare and are stated as a recommended level, upper level, and a short-term maximum level.
3. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. The highest annual average and maximum daily chloride concentrations were from EFF-006.
4. **Electrical Conductivity or Total Dissolved Solids.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum, or when expressed as TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. The highest annual average and maximum daily EC concentrations were from EFF-006.
5. **Sulfate.** The Secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. The highest annual average and maximum daily sulfate concentrations were from EFF-006.

(b) **Analysis.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 2.4 mg/L to 30 mg/L, with an average of 250 mg/L. These levels do not exceed the Secondary MCL, for three samples collected by the Discharger from October 2020 and September 2024.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring reports shows an

average effluent EC of 190 µmhos/cm, with a range from 72 µmhos/cm to 382 µmhos/cm. These levels do not exceed the Secondary MCL. The background receiving water EC averaged 162 µmhos/cm. The average TDS effluent concentration was 92 mg/L with concentrations ranging from 17 mg/L to 130 mg/L. These levels do not exceed the Secondary MCL.

(3) **Sulfate.** Sulfate concentrations in the effluent ranged from 12 mg/L to 12 mg/L, with an average of 12 mg/L. These levels do not exceed the Secondary MCL.

(c) **Effluent Limitations.**

On 17 January 2020, certain amendments to the Basin Plan incorporating a Program to Control and Permit Salt Discharges to Surface and Groundwater (Salt Control Program) became effective. Other amendments became effective on 2 November 2020 when approved by the U.S. EPA. The Salt Control Program is a three-phased program, with each phase lasting 10 to 15 years. The Basin Plan requires all salt dischargers to comply with the provisions of the program. Two compliance pathways are available for salt dischargers during Phase 1.

The Phase 1 Compliance pathways are: 1) Conservative Salinity Permitting Approach, which utilizes the existing regulatory structure and focuses on source control, conservative salinity limits on the discharge, and limits the use of assimilative capacity and compliance time schedules; and, 2) Alternative Salinity Permitting Approach, which is an alternative approach to compliance through implementation of specific requirements such as participating in the Salinity Prioritization and Optimization Study (P&O) rather than the application of conservative discharge limits.

The Discharger submitted a Notice of Intent for the Salinity Control Program indicating its intent to meet the Conservative Salinity Permitting Approach. This Order requires implementation of a Salinity Evaluation and Minimization Plan and includes a conservative salinity limit for EC of 700 µmhos/cm as a monthly average, consistent with the Conservative Salinity Permitting Approach.

(d) **Plant Performance and Attainability.** All effluent EC measurements and annual averages from October 2020 to September 2024 are significantly below both the MUN and AGR EC thresholds of 700 µmhos/cm and 900 µmhos/cm respectively.

4. WQBEL Calculations

a. This Order includes effluent limitations for chlorine residual, settleable solids, temperature, diazinon, chlorpyrifos, and methylmercury. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.5.b through e, below. See Attachment H for the WQBEL calculations.

b. **Effluent Concentration Allowance.** For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from section 1.4 of the SIP:

ECA = C + D(C – B) where C>B, and
ECA = C where C≤B

where:

ECA = effluent concentration allowance
D = dilution credit
C= the priority pollutant criterion/objective
B= the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples.

c. **Primary and Secondary MCLs.** For non-priority pollutants with primary MCLs to protect human health (e.g., nitrate plus nitrite), the AMEL is set equal to the primary MCL and the MDEL is calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

For non-priority pollutants with secondary MCLs that protect public welfare (e.g., taste, odor, and staining), WQBELs were calculated by setting the LTA equal to the secondary MCL and using the AMEL multiplier to set the AMEL. The MDEL was calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

d. **Aquatic Toxicity Criteria.** For constituents with acute and chronic aquatic toxicity criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The ECAs are converted to equivalent long-term averages (i.e. LTAacute and LTAchronic) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

e. **Human Health Criteria.** For constituents with human health criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The

AMEL is set equal to the ECA and the MDEL is calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

$$AMEL = mult_{AMEL}[\min(\underbrace{M_A ECA_{acute}}_{LTA_{acute}}, M_C ECA_{chronic})]$$

$$MDEL = mult_{MDEL}[\min(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}})]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where:

$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting acute ECA to LTA_{acute}
M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

Summary of Water Quality-Based Effluent Limitations
Discharge Point 002, 003, and 006

Table F-7 Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitations	Maximum Daily Effluent Limitations
Chlorine, Total Residual	mg/L	--	0.019
Settleable Solids	ml/L	--	1.0
Temperature	F	--	See Table Note 2
Diazinon and Chlorpyrifos	µg/L	See Table Note 3	See Table Note 3
Methylmercury	gram/year	--	See Table Note 4

Table F-7 Notes:

1. **Settleable solids.** Effluent limit applicable to Discharge Point 006 for flows of 250 MGD or less and for all flows from Discharge Points 002 and 003.
2. **Temperature.** The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.
3. **Diazinon and Chlorpyrifos.** Results for all discharge events during the permit term were non-detect. See Fact Sheet Section IV.C.3.e. Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0).
4. **Methylmercury**. Effective 31 December 2030, the calendar year methylmercury combined

loading from Discharge Points 002, 003, and 006 shall not exceed 0.53 grams/year.

5. Whole Effluent Toxicity (WET) –

a. **Chronic Toxicity.** The State Policy for Water Quality Control Toxicity Provisions (Toxicity Provisions) established numeric aquatic toxicity water quality objectives to protect Aquatic Life beneficial uses and a program of implementation. The Central Valley Water Board must include the requirements specified in the Toxicity Provisions for NPDES permits issued, reissued, renewed, or reopened after the effective dates of the Toxicity Provisions for Non-Stormwater NPDES Dischargers. The Central Valley Water Board is authorized to exempt certain Non-Stormwater NPDES Dischargers from some or all of Section III.C of the Toxicity Provisions if the Regional Board makes a finding that the discharge will have no reasonable potential to cause or contribute to an exceedance of the numeric aquatic toxicity water quality objectives. The reasonable potential conclusion necessary to exempt insignificant discharges need not be based on the reasonable potential analysis methods set forth in Section III.C.3 of the Toxicity Provisions.

Effluent discharges from the Facility are infrequent and of short duration, and large dilution is available in the Sacramento River. Exposure from the discharge to aquatic organisms is not chronic in nature. Therefore, authorized discharges from the Facility can be considered insignificant discharges with respect to chronic toxicity impacts in the receiving water.

Based on the infrequent and short-term duration of discharges from the Facility, the discharge does not exhibit signs of reasonable potential to cause an exceedance of the chronic numeric toxicity water quality objectives. Thus, the Central Valley Water Board authorizes the exemption of the Facility from the chronic whole effluent toxicity requirements in Section III.C.1- Section III.C.10 of the Toxicity Provisions.

b. **Acute Toxicity.** The previous permit required the Discharger conduct acute bioassays 1/storm year to determine if the effluent is contributing to acute toxicity in the receiving water. The following table presents the acute toxicity testing results reported by the Discharger during the term of Order R5-2020-0039.

i. **Analysis.** In accordance with section III.C.3.b of the Statewide Toxicity Provisions, an analysis for acute aquatic toxicity was conducted in lieu of chronic aquatic toxicity due to the infrequent and short-term duration of discharges from the Facility.

No dilution has been granted for acute whole effluent toxicity. Therefore, acute toxicity testing has been conducted at an instream waste concentration (IWC) of 100 percent effluent. A test result that fails the Test of Significant Toxicity (TST) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of

the Statewide Toxicity Provisions aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective. Based on acute toxicity testing conducted between 1 October 2020 through 30 June 2024, the discharge does not have reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective. Therefore, whole effluent toxicity effluent limitations are not justified at this time. However, due to the operations at the Facility (i.e., chlorination and dechlorination of discharges from the CWTP and Pioneer Reservoir, and the possibility for the discharge of untreated combined sewage during extreme wet weather events), this Order will retain the 1/storm year acute toxicity testing requirements when discharges from the Facility do occur.

Table F-8 Acute Whole Effluent Toxicity Testing Results – Percent Survival

Event # (Year – Discharge #)	RSW-001 (Upstream)	EFF-002	EFF-004	EFF-006	RSW-Garcia (Downstream)
2020-01	100%	NR	NR	100%	NR
2020-02	100%	97.5%	95%	100%	NR
2023-01	100%	NR	NR	95%	100%
2023-02	100%	100%	NR	100%	100%
2024-01	100%	NR	NR	100%	100%
2024-02	100%	NR	NR	100%	100%

NR = Not Recorded. No discharge from the given location occurred during the event.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations

40 C.F.R section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. Pursuant to the exceptions to mass limitations provided in 40 CF.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45 (d) requires maximum daily and average monthly discharge limitations for all dischargers other than POTWs unless impracticable. Due to the periodic and short-term nature of CSO discharges from the CSS, the application of average monthly effluent limitations is not considered necessary for chlorine residual and TSS.

The annual mass loading effluent limitation for methylmercury is based on direct application of the applicable TMDL waste load allocation. Since it is necessary to determine compliance with the TMDL waste load allocation on an annual basis, it is impracticable to calculate average weekly and average monthly effluent limitations.

The effluent limitations for settleable solids and temperature are based on the averaging periods specified in the Basin Plan.

3. Satisfaction of Anti-Backsliding Requirements

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(l).

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

4. Antidegradation Policies

This Order does not authorize lowering water quality as compared to the level of discharge authorized in the previous order, which is the baseline by which to measure whether degradation will occur. This Order does not allow for an increase in flow or mass of pollutants to the receiving water. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Accordingly, the permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

The CSO Control Policy requires implementation of a long-term control plan (LTCP) to comply with water quality-based requirements of the CWA. The Discharger updated the LTCP in 2018 and most recently in 2024. The Discharger's LTCP is based on the CSO Control Policy's presumption approach. This approach means that if the program meets certain performance criteria it is presumed that the discharge meets water quality standards. The selected CSO controls should include a post-construction water quality monitoring program adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls (59 Federal Register 18694). The planned control program is designed to allow cost-effective expansion or cost-effective retrofitting if additional controls are subsequently determined to be necessary to meet water quality standards or designated uses (59 Federal Register 18693). The performance criteria for the presumption approach option selected by the Discharger specifies the elimination or the capture for treatment of no less than 85 percent by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis. In addition, CSOs

remaining after implementation of the Nine Minimum Controls and that are captured for treatment should receive a minimum of primary clarification, solids and floatables disposal, and disinfection.

The majority of the time, the Discharger captures and provides treatment for up to 100 percent of the combined sewer flows, compared to minimum the 85 percent requirement (there have been infrequent instances where small volumes of untreated overflows have occurred from Discharge Points 004, 005, and 007). Therefore, almost all CSO's that occur from the Facility receive treatment (within the storage/transports) consisting of removal of floatable and settleable solids. The Discharger's water conservation efforts have resulted in consistent and significant reductions in dry weather and dry season flows over the last 20 years. The figure below shows the consistent downward trend and demonstrates that the CSS service area is not generating new flows. The overall annual average CSO discharge volume decreased by over 42 percent over the past 26 years. Water conservation, new plumbing codes for redevelopment, and ongoing collection system improvements are all factors in the gradual decrease in dry and wet weather flows over time.

The average number of days that untreated CSO's were discharged per year has also decreased from seven per year in the early 90's, prior to implementation of the LTCP, to less than once per year in the past 10 years. The treated CSO discharges have also decreased from 15 times per year on average to an average of five times per year during the same time period. Continued implementation of the current LTCP and Adaptive Management Strategies will ensure the permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS, pH, and fecal coliform organisms. Restrictions on TSS, pH, and fecal coliform organisms are discussed in Section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBEL's have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. This Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Summary of Final Effluent Limitations
Discharge Point 002, 003, and 006

Table F-9 Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				Basis
		Storm Year Average	Storm Year Median	Average Monthly	Maximum Daily	
Total Suspended Solids	mg/L	100	--	--	--	BPJ
Settleable Solids	ml/L	--	--	--	1.0	BP
Chlorine, Total Residual	mg/L	--	--	--	0.019	NAWQC
Fecal Coliform Organisms	MPN/100 mL	--	200	--	--	BPJ
pH	standard units	--	--	--	6.0 - 8.5	BPJ
Temperature	°F	--	--	--	See Table Note 6	TP
Diazinon and Chlorpyrifos	µg/L	--	--	See Table Note 7	See Table Note 7	TMDL
Methylmercury	g/year	--	--	--	See Table Note 8	TMDL

Table F-9 Notes:

1. **DC** – Based on the design capacity of the Facility.
   BP – Based on water quality objectives contained in the Basin Plan.
   BPJ – Based on Best Professional Judgement.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   TP – Based on the Thermal Plan.
   TMDL – Based on the TMDL for salinity and boron in the lower San Joaquin River.
2. **Storm Year Average:** 1 October through 30 September
3. **Total Suspended Solids:** Applicable to Pioneer Reservoir flows of 250 MGD or less and all flows from the CWTP. In addition to storm year average effluent limit of 100 mg/L, two consecutive samples shall not exceed 150 mg/L.
4. **Total Residual Chlorine:** The Discharger shall continuously operate the chlorination equipment when discharging to the Sacramento River.
5. **Fecal Coliform Organisms**: In addition, no three consecutive samples shall exceed 1,000MPN/100 mL.
6. **Temperature**: The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20 degrees F.
7. **Diazinon and Chlorpyrifos.** Results for all discharge events during the permit term were non-detect. See Fact Sheet Section IV.C.3.e.
8. **Methylmercury**. The calendar year methylmercury combined loading from Discharge Points 002, 003, and 006 shall not exceed 0.53 grams.

E. Interim Effluent Limitations

The State Water Board's Resolution 2008-0025 "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits" (Compliance Schedule Policy) requires the Central Valley Water Board to establish interim numeric effluent limitations in this Order for compliance schedules longer than 1 year. As discussed in Section VI.B.7 of this Fact Sheet, the Central Valley Water Board is approving a compliance schedule longer than 1 year for methylmercury. The Compliance Schedule Policy requires that interim effluent limitations must be based on current treatment plant performance or existing permit limitations, whichever is more stringent. Consistent with the Delta Mercury Control Program, this Order includes interim effluent limitations for total mercury based on Facility performance.

1. Methylmercury

a. **Compliance Schedule.** This Order contains a final effluent limitation for methylmercury based on the objective that became effective on 20 October 2011. The Discharger has complied with the application requirements in paragraph 4 of the State Water Board's Compliance Schedule Policy, and the Discharger's application demonstrates the need for additional time to implement actions to comply with the new limitations, as described below. Therefore, a compliance schedule for compliance with the effluent limitations for methylmercury is established in the Order.

In October 2013, the Discharger submitted to the Central Valley Water Board their Delta Methylmercury Total Maximum Daily Load Control Program Implementation Phase I Control Study Work Plan that laid out their proposed approach for evaluating potential methylmercury discharge control measures. A compliance schedule is necessary to allow the Discharger the time needed to evaluate and implement their proposed actions to comply with the final effluent limitations.

The Discharger has made diligent efforts to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream. The Discharger conducted monitoring once per discharge event for mercury and methylmercury during the term of Order R5-2020-0039. In coordination with the Sacramento Stormwater Quality Partnership, the Discharger continues to implement a number of source control activities aimed at minimizing the potential for the discharge of mercury (e.g., sediment removal, household hazardous waste program). The Discharger also participates in the Central Valley Clean Water Association (CVCWA) Delta Methylmercury TMDL Control Study Workgroup, which is evaluating methylmercury control opportunities.

The compliance schedule is as short as possible. The Central Valley Water Board will use the Phase 1 Control Studies' results and other information to consider amendments to the Delta Mercury Control Program during the Phase 1 Delta Mercury Control Program Review. Therefore, at this time it is

uncertain what measures must be taken to consistently comply with the waste load allocation for methylmercury. The interim effluent limits and final compliance date may be modified at the completion of Phase 1.

Interim performance-based limitations were established in a previous Order. The interim limitations were determined as described in section IV.E.1.b. below and are in effect until the final limitations take effect. The interim numeric effluent limitations and on-going source control measures will result in the highest discharge quality that can reasonably be achieved until final compliance is attained.

b. **Interim Limits for Total Mercury.** The Compliance Schedule Policy requires the Central Valley Water Board to establish interim requirements and dates for their achievement in the NPDES permit. Interim numeric effluent limitations are required for compliance schedules longer than 1 year. Interim effluent limitations must be based on treatment plant performance or previous final permit limitations, whichever is more stringent. When feasible, interim limitations must correspond with final permit effluent limitations with respect to averaging bases (e.g., AMEL, MDEL) for effluent limitations for which compliance protection is intended.

For mercury, the Delta Mercury Control Program requires point source discharges limit their discharges of inorganic (total) mercury to Facility performance-based levels during Phase 1 and for intermittent dischargers such as the CSS, the interim inorganic (total) mercury effluent mass limit shall consider site-specific discharge conditions. At the end of Phase 1, the interim inorganic (total) mercury mass limit will be re-evaluated and modified as appropriate. The Delta Mercury Control Program also requires interim limits established during Phase1 and allocations will not be reduced as a result of early actions that result in reduced inorganic (total) mercury and/or methylmercury in discharges.

The following table summarizes the storm year total mercury loadings based on the Facility's current performance October 2020 thru September 2024). The interim limitations for total mercury in this Order are based on the estimated mercury loadings from the CSS described in the April 2010 Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury Staff Report (see specifically Table G.2b, City of Sacramento Combined Stormwater/Sewer System Annual Water Volumes & Total Mercury Load Estimates). The April 2010 Staff Report estimated the maximum annual total mercury loading from the CSS discharges to be 341 grams/year. Establishing the interim limitations for total mercury at 341 grams/year is consistent with the intent of the TMDL to not penalize dischargers for early actions to reduce mercury. Effective immediately, and until 31 December 2030, the effluent storm year total mercury load shall not exceed 341 grams/year. These interim effluent limitations shall apply in lieu of the final effluent limits for methylmercury. The Discharger is in compliance with the interim storm-year limitations for mercury.

Table F-10 Summary of Annual Mercury and Methylmercury Loading

Storm Year (1 October – 30 September)	Total Mercury Load for Discharges from Discharge Points 002 and 006 (grams/storm year)	Total Methylmercury Load for Discharges from Discharge Points 002 and 006 (grams/storm year)
2019/2020	5.01	0.032
2020/2021	No Discharge	No Discharge
2021/2022	56.6	0.521
2022/2023	18.82	0.221
2023/2024	14.64	0.116

The Central Valley Water Board finds that the Discharger can undertake source control and treatment plant measures to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

F. Land Discharge Specifications – NOT APPLICABLE

G. Recycling Specifications – NOT APPLICABLE

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

On 4 March 2025, the U.S. Supreme Court issued a decision in the case of the City and County of San Francisco vs. U.S. Environmental Protection Agency (2025) 145 U.S. 704, which challenged some of the limits in NPDES permits. The Court ruled that “end result” provisions (e.g. receiving water limitations) are not allowed by the federal Clean Water Act and that NPDES permits must have specific requirements to meet water quality objectives and protect beneficial uses.

As a matter of state law only, this Order includes receiving water limitations for chronic and acute WET. These are state law requirements imposed pursuant to Water Code section 13263, which requires that WDRs orders implement the applicable Basin Plan, including its numeric and narrative water quality objectives for WET. The U.S. Supreme Court’s decision in City and County of San Francisco vs. U.S. Environmental Protection Agency did not interpret the Water Code. Further, there is no provision of the Water Code analogous to the NPDES permit shield that was the basis of the U.S. Supreme Court’s decision. Other receiving water limitations were removed from this permit as discussed below.

The Clean Water Act and implementing regulations specify that effluent limitations are required when there is reasonable potential for a discharge to cause or contribute to an exceedance of any applicable water quality standard. A Reasonable Potential Analysis (RPA) is a key step taken by permit writers to determine if a discharge has the potential to violate water quality standards. An RPA includes characterization of the effluent and receiving waters and an assessment of the water quality standards to see if projected concentrations in the receiving water after mixing with the effluent have the "reasonable potential" (RP) to exceed the water quality criteria. Effluent limitations and other permit conditions are prescribed based on an evaluation of this information. RPAs and effluent limitation calculations follow established NPDES program procedures and requirements (State Water Resources Control Board, 2005 and U.S. Environmental Protection Agency, 1991).

This Order also requires effluent and receiving water sampling when discharges occur to document any potential effects to the receiving water. In addition, this Order requires characterization monitoring of priority pollutants in the effluent during the permit term. All Central Valley NPDES permits contain a general re-opener provision that allow the Central Valley Water Board to amend the permit and include conditions, effluent limitations, provisions, or prohibitions. This would include scenarios where monitoring data indicate the need for new effluent limitations to ensure receiving water quality objectives are met. As an additional assurance, this Order prohibits operational changes that would significantly impact the character of the waste discharge. Nonetheless, the question remains as to whether an NPDES permit is adequately protective of water quality when the receiving water limitations are removed; or alternatively, whether additional conditions should be considered when removing receiving water limitations.

1. Below is a summary of the specific considerations for the removal of receiving water limitations. These considerations include associated effluent limitations, best management practices (BMPs) and/or water quality monitoring requirements.

    a. ***Bacteria.*** On 7 August 2018 the State Water Board adopted Resolution No. 2018-0038 establishing Bacteria Provisions, which are specifically titled "Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Bacteria Provisions and a Water Quality Standards Variance Policy" and "Amendment to the Water Quality Control Plan for Ocean Waters of California—Bacteria Provisions and a Water Quality Standards Variance Policy." The Bacteria Water Quality Objectives established in the Bacteria Provisions supersede any numeric water quality objective for bacteria for the REC-1 beneficial use contained in a water quality control plan before the effective date of the Bacteria Provision. However, the Statewide Bacteria Provisions provide that where a permit, waste discharge requirement (WDR), or waiver of WDR includes an effluent limitation or discharge requirement that is derived from a water quality objective or other guidance to control bacteria (for any beneficial use) that is more stringent than the Bacteria Water Quality Objective, the Bacteria Water Quality Objective would not be implemented in the permit, WDR, or waiver of WDR.

Analysis from CSO events showed that levels of indicator bacteria were significantly higher in downstream waters following CSO events. However, the assessment concluded that those increases were not problematic due to the short-term duration of discharge during periods when public contact with CSOs was minimal. The assessment noted that due to the dilutional (assimilative) capacity of the Sacramento River during CSS discharges, it was unlikely that the CSS would have caused any exceedances of objectives for those constituents in the Sacramento River. This Order also includes numeric effluent limitations for fecal coliform organisms, which is adequately protective of *E. coli* in the discharge and impacts to the receiving water.

b. ***Biostimulatory Substances and Dissolved Oxygen requirements.*** The Basin Plan contains a biostimulatory narrative water quality objective (WQO) and dissolved oxygen numeric water quality objectives that have been incorporated into previous permits as receiving water limitations. Biostimulatory substances and low dissolved oxygen can cause eutrophication and excessive algal growth in the receiving water along with other water quality issues related to taste, odor, color and toxicity. Discharges with high Biological Oxygen Demand (BOD) and/or Chemical Oxygen Demand (COD) may contribute to dissolved oxygen problems downstream.

There is no RP for dissolved oxygen, but the permit requires monitoring of dissolved oxygen in the receiving water after CSO discharges as well as visual monitoring of the receiving water for fungi, slimes, or objectionable growths. CSS's are not POTWs and are not subject to BOD5 limitations, and instead seek to minimize discharges to the Sacramento River, thereby minimizing the discharge of BOD5 to the maximum possible. The City captures 98.86% of the flow volume during the current permit term for at least primary treatment consistent with NPDES Permit Provision IV.A.1.b, which implements the CSO Control Policy requirement.

c. ***Chemicals, Pesticides, and Radioactive requirements.*** The Basin Plan has narrative and numeric water quality objectives for chemicals, pesticides, and radionuclides that are typically used as receiving water limitations in NPDES permits. As with other water quality constituents, NPDES regulations require effluent limitations where existing data indicate reasonable potential to cause or contribute to an exceedance in the receiving water. Attachments G and H provide details regarding the specific chemical constituents with reasonable potential and associated effluent limitations. These effluent limitations ensure the protection of beneficial uses in the receiving water. Analysis of existing data does not indicate presence of any radioactive constituents or pesticides on the characterization monitoring list.

Analysis from CSO events showed that levels of total and dissolved lead, and dissolved zinc were significantly higher in downstream waters following CSO events. However, the assessment concluded that those increases were not problematic due to the short-term duration of discharge during periods when public contact with CSOs was minimal. The assessment noted that due to the

dilutional (assimilative) capacity of the Sacramento River during CSS discharges, it was unlikely that the CSS would have caused any exceedances of objectives for those constituents in the Sacramento River. The Discharger, as part of their Public Outreach Program component of their Stormwater Quality Improvement Plan (as required under Municipal Separate Storm Sewer System Order R5-2016-0040), implements a variety of educational stormwater and urban runoff outreach programs. These programs are designed in part to reduce to the maximum extent practicable, pollutants in stormwater discharges associated with the application of pesticides, herbicides, and fertilizer.

d. ***Color, Taste, and Odors requirements.*** The Basin plan has a narrative water quality objective for color as well as one for taste and odors. These have been incorporated into previous permits as receiving water limitations. The WQA performed by the discharger concluded that color taste and odor are minimized due to the short-term duration of discharge and no effluent limitations are included in this permit. However, frequent visual monitoring of the receiving water for discoloration and other potential nuisance conditions is required.

e. ***pH requirements.*** The Basin Plan has narrative water quality objectives for pH that have been used as receiving water limitations in previous permits. A pH that is too high or too low can influence the solubility of metals and nutrients in the receiving water and impact the overall health of aquatic life. The discharge does not have RP for pH based on existing data.

   The WQA performed by the discharger concluded that pH effects are minimized due to the short-term duration of discharge and no effluent limitations are included in this permit. However, frequent this order does require frequent receiving water monitoring.

f. ***Temperature requirements.*** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on 7 January 1971 and amended this plan on 18 September 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. For the purposes of the Thermal Plan, the discharges are considered to be of Elevated Temperature Waste to an Estuary, as defined in the Thermal Plan. This Order includes an effluent limitation for temperature which is adequately protective of temperature impacts in the receiving water.

g. ***Turbidity requirements.*** The Basin Plan includes numeric turbidity water quality objectives that are based on existing turbidity in the receiving waters. These have been incorporated into previous permits as receiving water limitations. The discharge does not have reasonable potential or effluent limitations for turbidity, however the permit requires frequent monitoring of turbidity in the receiving waters.

The WQA performed by the discharger concluded that turbidity impacts are minimized due to the short-term duration of discharge during periods when public contact with CSOs was minimal. The assessment noted that due to the dilutional (assimilative) capacity of the Sacramento River during CSS discharges, it was unlikely that the CSS would have caused any exceedances of objectives for those constituents in the Sacramento River. The City captures 98.86% of the flow volume during the current permit term for at least primary treatment consistent with NPDES Permit Provision IV.A.1.b, which is implemented the CSO Policy requirement.

h. ***Floating Material, Oil and Grease, Suspended Sediments, Suspended Material, and Settleable Substances requirements.*** The previous permit contained receiving water limitations relative to narrative water quality objectives in the Basin Plan for Floating Material, Oil and Grease, Suspended Sediments, Suspended Material and Settleable Substances. These constituents can affect water quality by reducing water clarity and light penetration which can ultimately lead to increased water temperatures, decreased dissolved oxygen levels, and eutrophication. Contamination from these substances can impact both aquatic and human health.

This Order contains TSS limitations and CSS's are governed by the NMC policy and seek to minimize discharges to the Sacramento river, thereby minimizing the discharge of BOD5 to the maximum possible. The City captured 98.86% of the flow volume during the current permit term for at least primary treatment consistent with NPDES Permit Provision IV.A.1.b, which implements the CSO Policy requirement. Primary treatment will remove significant portions of TSS and BOD from the influent combined influent. This Order also requires frequent visual monitoring in the receiving waters for floating material, visible films, sheens or coating, suspended matter, and bottom deposits. This Order also includes numeric effluent limitations for Total Suspended Solids and settleable solids.

2. **Review of Other Relevant Factors**

In addition to the considerations listed in Section V.A.1 above, Central Valley Water Board staff also considered the other relevant factors below in the review of receiving water limitations.

i. ***Synergistic effects.*** Is there a known concern that the discharge will combine with the receiving water and produce adverse synergistic effects? For example, surface water discharges may be fully compliant with dissolved oxygen and narrative objectives, but may combine with poor conditions in the receiving water to cause harmful algal blooms (HABs), eutrophication, dissolved oxygen sag, toxic effects, taste and odor, and other harmful conditions. Is there the concern that the discharge when combined with the receiving water would have color concerns (e.g., mine discharge, floc due to pH change, etc.)?

There are no known concerns for adverse synergistic effects in the receiving water.

ii. ***Limitations enforced within the receiving water.*** Are there specific chemicals or pesticides that have Basin Plan objectives that are not enforced through effluent limitations? For example, certain organochlorine pesticides effluent limitations are based on numeric water quality objectives consistent with applicable regulations. However, more stringent Basin Plan objectives require the receiving water to be "non-detect" for these materials. In these circumstances, removing the receiving water limitation would result in reduced protections that are required under federal and state regulations.

The discharge does not demonstrate exceedances of the Basin Plan's receiving water quality objectives for this category of chemicals and/or pesticides.

iii. ***Other site-specific information.*** Are there any special studies that have been conducted in the receiving water body/watershed or impairments that relate to existing receiving water limitations?

This Order considers the Clean Water Act 303(d) List of Impaired Water Bodies when they are developed. The Sacramento is on the 303(d) for impaired water bodies and does include TMDLs Chlorpyrifos, Diazinon, and Mercury. A pollutant-by-pollutant evaluation of each pollutant of concern is described in Section IV.C.3 of this Fact Sheet.

Order 2020-0039 required the Discharger to complete an updated WQA to evaluate whether implementation of their LTCP under the U.S. EPA CSO Control Policy presumption approach is ensuring continued compliance with applicable water quality standards and are adequately protecting beneficial uses in the receiving water.

The Discharger submitted the updated WQA in September 2024 (City of Sacramento Combined Sewer System Water Quality Assessment, prepared by Larry Walker Associates). As part of this assessment, the Discharger performed effluent and receiving water monitoring during periods of overflow discharge to the Sacramento River during the 2020/2021, 2021/2022, 2022/2023 and 2023/2024 storm years. Review of the data from the updated WQA submitted in September 2024 indicates the effluent quality has not changed since the 2013 WQA was conducted, and implementation of the Discharger's LTCP under the U.S. EPA CSO Control Policy presumption approach is ensuring continued compliance with applicable water quality standards and are adequately protecting beneficial uses.

iv. ***Data characterization.*** Have the effluent and receiving water been fully characterized?

This Order requires characterization monitoring in the effluent every permit term to confirm that the presumptive approach results in compliance with

water quality standards and protection of beneficial uses. A full assessment of priority pollutant and other constituents of concern in the effluent is required.

v. ***Compliance history.*** Has the facility had any compliance issues meeting receiving water limitations during the most recent permit term (e.g., received a Notice of Violation for exceeding a receiving water limitation)? Overall, does the facility have any ongoing compliance issues (e.g., frequent operational upsets).

The Facility does not have ongoing compliance issues and captures 98.86% of the flow volume during the current permit term for at least primary treatment consistent with NPDES Permit Provision IV.A.1.b.

3. **Review of Receiving Water Limitations.**

Based on Central Valley Water Board staff review of the considerations presented above, existing permit provisions are adequate to ensure the Facility discharge consistently meets federal and state regulations for the protection of beneficial uses in the receiving water. The effluent limitations and receiving water monitoring in this Order along with the permit prohibitions and reopener provisions provide a multi-pronged approach to ensuring water quality standards are met. As such, receiving water limitations from the previous permit can be removed without the inclusion of additional conditions. The Facility discharges infrequently and on a short term basis. Furthermore, the WQA performed by the Discharger determined that beneficial uses were not impaired due to CSOs. The receiving water has sufficient assimilative capacity for the short duration and infrequent occurrence of CSOs. There were no consistent exceedances of water quality standards of any constituents detected. Table F-10 below provides a summary of the considerations in removing the receiving water limitations.

Table F-11 Receiving Water (RW) Limitations Review

Receiving Water Limitations Removed	Effluent Limitations and/or RSW Monitoring	Other Relevant Factors
Bacteria (Numeric WQO)		The WQA investigated the presence of bacteria in the RSW. This Order also includes numeric effluent limitations for fecal coliform.
Biostimulatory Substances (Narrative WQO)	Receiving water limitation is not needed due the short term nature of the discharge and assimilative capacity of the receiving water.	The WQA investigated the presence of biostimulatory substances in the RSW.
Chemical Constituents (Narrative WQO)	Receiving water limitation is not needed due the short term	TMDLs from the 303(d) list are included as effluent

Receiving Water Limitations Removed	Effluent Limitations and/or RSW Monitoring	Other Relevant Factors
	nature of the discharge and assimilative capacity of the receiving water.	limitations and the WQA investigated the presence of chemical constituents in the RSW.
Color (Narrative WQO)	No effluent limitations, the CSS minimizes discharges to the maximum extent possible. Visual monitoring when discharging is required in the RSW.	
Dissolved Oxygen (Numeric WQO)	No effluent limitations, the CSS minimizes discharges to the maximum extent possible. Visual monitoring when discharging is required in the RSW.	The WQA investigated the presence of dissolved oxygen in the RSW.
Floating Material (Narrative WQO)	No effluent limitations, the CSS minimizes discharges to the maximum extent possible. Visual monitoring when discharging is required in the RSW.	
Oil and Grease (Narrative WQO)	No effluent limitations, the CSS minimizes discharges to the maximum extent possible.	
pH (Numeric WQO)	Effluent pH limitations are included in this Order. No adverse impacts to beneficial uses are expected in the RW.	The WQA investigated the effect of CSS effluent on pH in the RSW.
Pesticides (Narrative/Numeric WQO)	No adverse impacts to beneficial uses from pesticides in the characterization monitoring list are expected.	The WQA investigated the presence of pesticides in the RSW.
Radioactivity (Narrative/Numeric WQO)	No adverse impacts to beneficial uses are expected in the RW.	
Suspended Sediments (Narrative WQO)	Total Suspended Solids effluent limitation is included. Visual monitoring when discharging of suspended matter is required in the RSW.	
Settleable Substances (Narrative WQO)	Total Suspended Solids effluent limitation is included. Visual	

Receiving Water Limitations Removed	Effluent Limitations and/or RSW Monitoring	Other Relevant Factors
	monitoring when discharging of suspended matter is required in the RSW.	
Suspended Material (Narrative WQO)	Total Suspended Solids effluent limitation is included. Visual monitoring when discharge of suspended matter is required in the RSW.	
Taste and Odors (Narrative WQO)	No effluent limitations, the CSS minimizes discharges to the maximum extent possible.	
Temperature (Numeric WQO)	Temperature effluent limitations are in effect with once per discharge event effluent monitoring in effect at all discharge locations.	The Thermal Plan for Delta Dischargers is applicable to the Discharger.
Turbidity (Numeric WQO)	No effluent limitation. Once per discharge event monitoring at multiple RSW locations.	

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Mercury.** The Delta Mercury Control Program was designed to proceed in two phases. Phase 2 begins after the Phase 1 Delta Mercury Control Program Review and Board approval. As a result of the Phase 1 Delta Mercury Control Program Review, changes may be needed to final allocations, implementation and monitoring requirements, and compliance schedules. Therefore, this Order may be reopened to address changes to the Delta Mercury Control Program.

b. **Compliance with Statewide Sanitary Sewer System General Order.** The CSS is not currently subject to Order 2022-0103-DWQ, a Statewide General WDR for Sanitary Sewer Systems. If the State Water Board revises or reissues Order 2022-0103-DWQ during the term of this Order to extend coverage to the CSS, this Order may be reopened and revised to ensure consistency with and eliminate duplication of any applicable provisions and/or requirements.

c. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

2. Special Studies and Additional Monitoring Requirements – Not Applicable

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications

a. **Combined Wastewater Control System Plan of Operations**. The Combined Wastewater Control System Plan of Operations includes the elements of a Sewer System Management Plan (SSMP) that is required of separate sanitary sewer collection systems under State Water Board Order 2006-0003-DWQ, Statewide General WDR's for Sanitary Sewer Systems. The Discharger will be required to revise and update, as necessary, their Combined Wastewater Control System Plan of Operations to ensure compliance with the NMC's and/or LTCP

requirements in this Order. The Combined Wastewater Control System Plan of Operations was updated in 2013 and 2018 to specify the procedures that will be used to manage the CSS and establish operation, maintenance, and inspection procedures to maximize the removal of pollutants during and after each precipitation event using all available facilities within the combined wastewater collection and treatment system, with the goal of achieving the highest treatment possible and minimizing CSO's and CSS outflows.

The Discharger is required to operate the combined wastewater collection and treatment system in conformance with the approved Combined Wastewater Control System Plan of Operations and shall report any variation from the Plan in the monthly monitoring reports provided to the Central Valley Water Board. Further modifications to the Combined Wastewater Control System Plan of Operations must be submitted for review and approval by the Executive Officer before they may become effective.

Also, due to the potential impact to the Sacramento River related to the discharge of untreated wastewater from Sump 2 Bypass (Discharge Points 004 and 005), and Sump 1A Bypass (Discharge Point 007), the Discharger is required to prepare and submit a report to the Central Valley Water Board that describes the circumstances under which the overflow(s) occurred. As part of this report, the Discharger shall evaluate whether the overflows could have been avoided with operational measures and infrastructure improvements and propose as necessary any modifications necessary to the Combined Wastewater Control System Plan of Operations.

b. **Implementation of the NMCs.** The NMC's are technology-based requirements for CSO's. Order R5-2020-0039 required implementation of the NMC's by the Discharger, as well as annual progress reports that document implementation of each of the NMC's. This Order carries forward the requirements from Order R5-2020-0039 to continue implementation of the Discharger's current measures to comply with the NMCs described in Section VI.C.4.b, and annual progress reports as described in Attachment E, Section X.D.4.

c. **Implementation of the LTCP.** The Discharger's 2014 Combined Sewer System LTCP Update Work Plan and Schedule evaluated storage and conveyance projects and developed a full prioritized list of projects based on updated model results. Order R5-2020-0039 required the Discharger to update its LTCP and continue implementation of the previous CSSIP. The Discharger's 2024 Combined Sewer System LTCP Update provided an implementation schedule for the top prioritized projects going out to 2034. This Order requires the continued implementation of the LTCP.

In addition, due to concerns of increased combined sewer system flows from new development and redevelopment within the CSS service area, this Order includes a provision (Section VI.4.c.iii of the WDRs) that specifically requires the Discharger to continue implementing the LTCP to manage the flow capacity of the CSS to minimize CSO's and CSS outflows and maintain the overall annual percentage of flow routed to the EchoWater Resource Recovery Facility as new development and redevelopment projects are implemented. The Discharger shall implement measures to the maximum extent practicable that ensure new flows from growth within the CSS service area do not result in an increase in CSO's or CSS outflows or reduce the overall percentage of annual flow routed to the EchoWater Resource Recovery Facility. Annual progress reports are required that include estimates of the added volume of drainage and sewer flows from growth within the CSS service area and a discussion of how the CSS will be able to manage the increased flows to maintain compliance with this new provision.

This Order also requires the Discharger to proactively manage the growth so CSO's and outflows do not increase. The Discharger's Combined Sewer System Development Policy requires mitigation of sewer and drainage flows to the CSS from new development and redevelopment projects. However, in instances where a developer cannot mitigate flows the City requires the payment of fees to share in the cost of City sponsored projects within the CSS. Projects to address buildout flows can be implemented, as needed, to ensure there are no increases in CSO's and outflows.

In previous permits the Discharger's LTCP was designed to achieve the following interim goals as progress was made towards the final goal of minimizing street flooding during a 10-year storm event and to prevent structure flooding during the 100-year storm event:

i. Obtaining protection from a 5-year storm in the six areas of worst flooding (including downtown, north of Capital Park; U.C. Medical Center area; immediately south of Highway 80 between Riverside and Freeport; the area northeast of Highway 99 and Highway 80interchange; the area northwest of Highway 99 and Highway 80interchange, and the Land Park area),

ii. Obtaining protection from a 5-year storm throughout the combined sewer system area,

iii. Obtaining protection from a 10-year storm in the six areas of worst flooding, and then

iv. Obtaining the goal of protection from a 10-year storm event throughout the combined sewer system.

Previous LTCPs identified specific projects and implementation schedules to advance the 5-year and 10-year flooding goals. However, climate change, resiliency planning, and updated system modeling indicate those projects no longer make meaningful progress toward the goal of capturing and storing peak flows from the 10-year, 6-hour design storm to achieve protection from outflows. This Order modifies the requirement to allow the Discharger to shift its LTCP approach from an exclusive focus on flood-reduction targets to a program that better identifies areas susceptible to system outflows, while maintaining a continued focus on reducing or eliminating overflows.

The Discharger is implementing an Adaptive Management Plan to better prioritize upcoming capital improvements based on CSS needs and to maintain compliance with the CSO Policy. The Plan includes water-level monitoring at prioritized locations in the CSS, and updates to the H&H model, and field confirmation of outflow conditions. Once sufficient data and information are collected under this approach, the LTCP's flood-reduction goals may be modified in future permits.

The Adaptive Management Plan is expected to be adjusted proactively on a periodic basis (e.g., each permit term). If implementation of the updated LTCP's Adaptive Management Plan indicates that CSOs and CSS outflows are increasing, the Discharger must reconsider development strategies and propose practices for approval by the Central Valley Water Board Executive Officer.

5. Special Provisions for POTWs – Not Applicable

6. Other Special Provisions

a. Requirements are included in the Order to ensure that the Discharger complies with applicable regulations for the disposal of collected screenings, sludge, and other solids removed from the CSS treatment systems.

7. Compliance Schedules

In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 C.F.R. section 122.44(d). There are exceptions to this general rule. The State Water Board's Resolution 2008-0025 "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits" (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a Total Maximum Daily Load (TMDL). All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric effluent limitations

for that constituent or parameter, interim requirements and dates toward achieving compliance, and compliance reporting within 14 days after each interim date. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

This Order includes a Compliance Schedule for Methylmercury carried over from the previous Order R5-2020-039. The Delta Mercury Control Program is composed of two phases. Phase 1 is complete and Phase 1 Review is currently underway. Phase 1 emphasized studies and pilot projects to develop and evaluate management practices to control methylmercury. Phase 1 included provisions for: implementing pollution minimization programs and interim mass limits for inorganic (total) mercury point sources in the Delta and Yolo Bypass; controlling sediment-bound mercury in the Delta and Yolo Bypass that may become methylated in agricultural lands, wetlands, and open-water habitats; and reducing total mercury loading to the San Francisco Bay, as required by the *Water Quality Control Plan for the San Francisco Bay*. As part of Phase 1, the CVCWA Coordinated Methylmercury Control Study Work Plan was approved by the Executive Officer on 7 November 2013. The final CVCWA Methylmercury Control Study was submitted to the Central Valley Water Board on 19 October 2018 and revised on 26 October 2018. Additionally, the Discharger submitted a *City of Sacramento Combined Sewer System Methylmercury Control Study Final Report* dated 19 October 2018.

As part of Phase 1, the Delta Mercury Control Program also required dischargers to participate in a Mercury Exposure Reduction Program (MERP). The objective of the MERP is to reduce mercury exposure of Delta fish consumers most likely affected by mercury. The Discharger elected to provide financial support in a collective MERP with other Delta dischargers, rather than be individually responsible for any MERP activities. An exposure reduction work plan for Executive Officer approval was submitted on 20 October 2013, which addressed the MERP objective, elements, and the Discharger's coordination with other stakeholders.

The Central Valley Water Board is conducting a Phase 1 Delta Mercury Control Program Review that considers: modification of methylmercury goals, objectives, allocations and/or the final compliance date; implementation of management practices and schedules for methylmercury controls; and adoption of a mercury offset program for dischargers who cannot meet their load and WLA's after implementing all reasonable load reduction strategies. The review will also consider other potential public and environmental benefits and negative impacts (e.g., habitat restoration, flood protection, water supply, and fish consumption) of attaining the allocations. The fish tissue objectives, linkage analysis between objectives and sources, and the attainability of the allocations will be re-evaluated based on the findings of Phase 1 control studies and other information. The linkage analysis, fish tissue objectives, allocations, and time schedules shall be adjusted at the end of Phase 1, or subsequent program reviews, if appropriate.

Phase 2 begins after the Phase 1 Delta Mercury Control Program Review. During Phase 2, dischargers shall implement methylmercury control programs and continue inorganic (total) mercury reduction programs. Compliance monitoring and implementation of upstream control programs also shall occur in Phase 2. Any compliance schedule contained in an NPDES permit must be "…*an enforceable sequence of actions or operations leading to compliance with an effluent limitation*…" per the definition of a compliance schedule in CWA section 502(17). See also 40 C.F.R. section 122.2 (definition of schedule of compliance). The compliance schedule for methylmercury meets these requirements.

Task	**Date Due**
Phase 1	
i. Submit CVCWA Coordinated Methylmercury Control Study Work Plan	**Complete (7 November 2013)**
ii. Submit Pollution Prevention Plan (PPP) for Mercury (per Section VI.C.3.a)	**Complete (1 August 2014)**
iii. Implement CVCWA Coordinated Methylmercury Control Study Work Plan	**Complete**
iv. Annual Progress Reports	**See Technical Reports Table**
v. Submit CVCWA Coordinated Methylmercury Control Study Progress Report	**Complete (20 October 2015)**
vi. Submit Final CVCWA Coordinated Methylmercury Control Study	**Complete (19 October 2018 and 26 October 2018)**
Phase 2	
vii. Implement methylmercury control programs	**TBD**
viii. Full Compliance	**See Technical Reports Table**

Federal regulations at 40 C.F.R. section 122.47(a)(1) require that, "*Any schedules of compliance under this section shall require compliance as soon as possible*…" The Compliance Schedule Policy also requires that compliance schedules are as short as possible and may not exceed 10 years, except when "*…a permit limitation that implements or is consistent with the waste load allocations specified in a TMDL that is established through a Basin Plan amendment, provided that the TMDL implementation plan contains a compliance schedule or implementation schedule.*" As discussed above, the Basin Plan's Delta Mercury Control Program includes compliance schedule provisions and allows compliance with the WLA's for methylmercury by 2030. Until the Phase 1 Control Studies are complete and the Central Valley Water Board conducts the Phase 1 Delta Mercury Control Program Review, it is not possible to determine the appropriate compliance date for the Discharger that is as soon as possible. Therefore, this Order establishes a compliance schedule for the final WQBEL's for methylmercury with full compliance required by 31 December 2030, which is consistent with the Final Compliance Date of

the TMDL. At completion of the Phase 1 Delta Mercury Control Program Review, the final compliance date for this compliance schedule will be re-evaluated to ensure compliance is required as soon as possible. Considering the available information, the compliance schedule is as short as possible in accordance with federal regulations and the Compliance Schedule Policy.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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 sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for the reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is required to comply with these requirements, which are necessary to determine compliance with this Order. The following provides additional rationale for the monitoring and reporting requirements contained in the MRP for this facility.

Water Code section 13176, subdivision (a), states: “The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.” The DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code sections 13370, subd. (c), 13372, 13377.). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code section 13372, subd. (a).) Lab accreditation is not required for field tests such as tests for color, odor, turbidity, pH, temperature, dissolved oxygen, electrical conductivity, and disinfectant residual.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess the performance of the Pioneer Reservoir and CWTP treatment systems. The monitoring frequencies for flow, TSS and settleable solids (once per discharge event) have been retained from Order R5-2020-0039.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. Effluent monitoring for those pollutants expected to be present in discharges from Discharge Point 002 (Monitoring Location EFF-002), 003 (Monitoring Location EFF-003), and 006 (Monitoring Location EFF-006) are required as shown in the MRP (Attachment E). To determine compliance with effluent limitations, this Order retains the monitoring requirements for TSS, settleable solids, pH, dissolved oxygen, fecal coliform organisms, chlorine residual, temperature, methylmercury, diazinon, and chlorpyrifos from Order R5-2020-0039. This Order also retains monitoring for mercury to determine compliance with interim effluent limits. Also, consistent with Order R5-2020-0039, flow is required to be monitored continuously. Due to continuing concerns related to ammonia toxicity in CSO discharges, monitoring for ammonia nitrogen also continues to be required (grab samples during each discharge event).

3. In previous permit terms, the Discharger raised concerns related to potential analytical method interference at low concentrations associated with monitoring chlorine residual in accordance with EPA approved methods. These interferences may result in false positives. As described in Section II.A of this Fact Sheet, the Discharger uses sodium bisulfite to dechlorinate discharges from Discharge Points 002, 003 and 006 prior to discharge, and requested that the Order allow compliance with the chlorine residual effluent limitations to be demonstrated through the detection of the dechlorination agents used. Monitoring for dechlorination agent residual has been retained from Order R5-2020-0039 and the compliance determination language included in Section VII.G of the Limitations and Discharge Requirements of this Order allow compliance to be determined based on data representing the presence of dechlorination agents in discharges.

4. Although discharges from Discharge Points 004, 005 and 007 rarely occur, this Order continues to require monitoring when a discharge does occur for several indicator parameters (flow, pH, dissolved oxygen, temperature, total suspended solids, settleable solids, fecal coliform, and ammonia). This data will be used to assess the potential impact(s) to the receiving water when a CSO discharge does occur from any of these discharge points.

5 . Water Code section 13176, subdivision (a), states: “The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3(commencing with Section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.” The DDW certifies laboratories through its Environmental Laboratory Accreditation Program (ELAP).

   Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA.(Wat. Code §§ 13370, subd. (c), 13372, 13377.) Section 13176 is applicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat.Code § 13372, subd. (a).) The holding time requirements are 15 minutes for chlorine residual, dissolved oxygen, and pH, and immediate analysis is required for temperature. (40 C.F.R. § 136.3(e), Table II).

C. Receiving Water Monitoring

1. Surface Water

a. **Delta Regional Monitoring Program.** The Central Valley Water Board requires individual dischargers and discharger groups to conduct monitoring of Delta waters and Delta tributary waters in the vicinity of their discharge, known as ambient (or receiving) water quality monitoring. This monitoring provides information on the impacts of waste discharges on Delta waters, and on the extant condition of the Delta waters. However, the equivalent funds spent on current monitoring efforts could be used more efficiently and productively and provide a better understanding of geographic and temporal distributions of contaminants and physical conditions in the Delta, and of other Delta water quality issues, if those funds were used for a coordinated ambient monitoring effort, rather than continue to be used in individual, uncoordinated ambient water quality monitoring programs. The Delta Regional Monitoring Program will provide data to better inform management and policy decisions regarding the Delta.

The Discharger is required to participate in the Delta Regional Monitoring Program. Delta Regional Monitoring Program data is not intended to be used directly to represent either upstream or downstream water quality for Monitoring Program monitoring stations are established generally as “integrator sites” to evaluate the combined impacts on water quality of multiple discharges into the Delta; Delta Regional Monitoring Program monitoring stations would not normally be able to identify the source of any specific constituent but would be used to identify water quality issues needing further evaluation. Delta Regional Monitoring Program monitoring data may be used to help establish background receiving water quality for an RPA in an NPDES permit after evaluation of the applicability of the data for that purpose. In general, monitoring data from samples collected in the immediate vicinity of the discharge will be given greater weight in permitting decisions than receiving water monitoring data collected at greater distances from the discharge point. Delta Regional Monitoring Program data, as with all environmental monitoring data, can provide an assessment of water quality at a specific place and time that can be used in conjunction with other information, such as other receiving water monitoring data, spatial and temporal distribution and trends of receiving water data, effluent data from the Discharger’s discharge and other point and non-point source discharges, receiving water flow volume, speed and direction, and other information to determine the likely source or sources of a constituent that resulted in exceedance of a receiving water quality objective.

Participation in the Delta Regional Monitoring Program by a Discharger shall consist of providing funds and/or in-kind services to the Delta Regional Monitoring Program.

Since the Discharger is participating in the Delta Regional Monitoring Program, this Order does not require receiving water characterization monitoring for purposes of conducting the RPA. Data from the Delta Regional Monitoring Program may be utilized to characterize the receiving water in the permit renewal. Alternatively, the Discharger may conduct any site-specific receiving water monitoring deemed appropriate by the Discharger and submit that monitoring data with the ROWD. In general, monitoring data from samples collected in the immediate vicinity of the discharge will be given greater weight in permitting decisions than receiving water monitoring data collected at greater distances from the discharge point. Historic receiving water monitoring data taken by the Discharger and from other sources may also be evaluated to determine whether or not that data is representative of current receiving water conditions. If found to be representative of current conditions, then that historic data may be used in characterizing receiving water quality for the purposes of the RPA.

b. Receiving water monitoring is necessary to assess compliance with to assess the impacts of the discharge on the receiving stream.

c. Receiving water monitoring sample types for pH, temperature, dissolved oxygen, turbidity, and total ammonia nitrogen at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 (as outlined in Table E-5) have been retained from Order R5-2015-0045 to characterize the receiving water for these parameters. Monitoring frequencies have been updated to reflect those approved in the Discharger's Delta RMP approval letter dated 30 September 2015, with the exception of *E. coli*, which has been added to receiving water monitoring at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 to determine compliance with the new applicable receiving water limitations.

D. Whole Effluent Toxicity Testing Requirements –

Acute Toxicity. Due to the continued concerns over the potential short-term toxicity that may result from CSO discharges, the acute whole effluent toxicity testing requirements contained in Order R5-2020-0039 are retained in this Order.

Aquatic toxicity testing is necessary to evaluate the aggregate toxic effect of a mixture of toxicants in the effluent on the receiving water. Acute toxicity testing is conducted over a short time period and measures mortality, while chronic toxicity testing is conducted over a short or longer period and may measure mortality, reproduction, and growth. For this permit, aquatic toxicity testing is to be performed following methods identified in the Code of Federal Regulations, title 40, part 136, or other U.S. EPA-approved methods, or included in the following U.S. EPA method manuals: Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013), and Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Acute whole effluent toxicity testing is required to demonstrate compliance with the toxicity receiving water limitation and acute toxicity effluent limitations/targets.

1. The discharge is subject to determination of "Pass" or "Fail" from an acute toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

2. The null hypothesis (Ho) for the TST statistical approach is:

   Mean discharge IWC response ≤ RMD x Mean control response, where the acute RMD = 0.80.

   A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail."

3. The relative "Percent Effect" at the discharge IWC is defined and reported as:

   Percent Effect = ((Mean control response – Mean discharge IWC response) / Mean control response) x 100.

   This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations, i.e., a control and IWC. The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC differs from the control, the test result is "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

E. Other Monitoring Requirements

1. Effluent and Receiving Water Characterization Monitoring

Routine monitoring for priority pollutants will allow for the characterization of any CSO discharges that occur to the Sacramento River during the permit term. This Order continues to require annual monitoring for priority pollutants and several other constituents of concern. See Section IX.A of the MRP for more detailed requirements related to performing priority pollutant monitoring.

2. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. section 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by

U.S.EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from their own laboratories or their contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall submit annually the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Combined Wastewater Collection and Treatment System. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following **<Describe Notification Process (e.g., newspaper name and date)>**

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website (http://www.waterboards.ca.gov/centralvalley/board_info/meetings/)

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on <**Date**>.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **26/27 February 2026**
Time: **8:30 a.m**
Location: <Online> **OR** <Regional Water Quality Control Board, Central Valley Region>
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at waterqualitypetitions@waterboards.ca.gov

Instructions on how to file a petition for review (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) are available on the Internet.

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Matthew Richter at 916-464-4745, or matthew.richter@waterboards.ca.gov