CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2023-0039

AMENDING
ORDER R5-2020-0007
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
CA0079138

CITY OF STOCKTON
REGIONAL WASTEWATER CONTROL FACILITY,
SAN JOAQUIN COUNTY

FINDINGS

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

1. On 20 February 2020, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2020-0007, prescribing waste discharge requirements for the City of Stockton's wastewater treatment facility. For the purposes of this Order, the City of Stockton is hereafter referred to as "Discharger" and the wastewater treatment facility is hereafter referred to as "Facility."

2. Waste Discharge Requirements Order R5-2020-0007 (NPDES Permit No. CA0079138) authorizes the discharge of up to 55 million gallons per day of tertiary treated effluent to the San Joaquin River, a water of the United States and within the legal boundary of the Sacramento-San Joaquin Delta.

3. Under the current Order, the treatment system in the section of the Facility east of the San Joaquin River includes screening, grit removal, raw sewage pumps, and primary sedimentation, where settling is enhanced. After wastewater passes through the primary clarifiers, it is pumped to a biotower treatment process and further routed to secondary clarifiers. Effluent from the secondary clarifiers is pumped from the east section of the Facility beneath the San Joaquin River to the facultative pond system on the west side of the San Joaquin River. Additional secondary treatment and water storage is available in the facultative ponds. Additional treatment is also available through engineered treatment wetlands on the west side of the San Joaquin River. Treatment through the facultative ponds and/or constructed wetlands are optional flow paths dependent on a variety of operational factors. Effluent from the facultative ponds, constructed wetlands, or diversion structures (as applicable) is routed to the Facility's tertiary treatment system.

   Tertiary treatment consists of a nitrifying biotower for ammonia removal, followed by dissolved air floatation units, where removal efficiencies are enhanced through chemical addition. Following the dissolved air floatation units, wastewater is routed through dual media tertiary filters and disinfected using chlorination/dichlorination prior to discharge to the San Joaquin River.

4. The Facility has been upgraded to comply with certain requirements in Order R5-2020-0007 consistent with the applicable compliance deadlines. The upgrades and modifications will increase the reliability and efficiency of the wastewater and solids treatment systems, improve the treatment processes based on existing and projected flows, and reduce nitrate plus nitrite (as N) concentrations in the final effluent. The upgraded Facility treatment includes fine screening, grit removal, primary clarification, activated sludge with nutrient removal, secondary clarification, tertiary filtration with disk filters, and UV disinfection. Construction is scheduled to be substantially complete by December 2023. Commissioning activities are proposed to be completed before 1 June 2024.

5. The Discharger is re-instating an old outfall on the east bank of the San Joaquin River (East Bank Outfall) which will replace the current outfall located on the west bank of the river (West Bank Outfall). The Discharger requested an amendment to Order R5-2020-0007 to reflect this change. Once the Discharger initiates discharge from the new outfall, discharges from the current outfall will cease and various facilities on the west bank of the river will be decommissioned as part of the upgrade project. This Order amends Order R5-2020-0007 to include the new outfall.

6. Order R5-2020-0007 may be reopened to include an updated facility description based on the upgrades and modifications.

7. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (“CEQA”) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit. (Pacific Water Conditioning Ass’n, Inc. v. Discharger Council of Discharger of Riverside (1977) 73 Cal.App.3d 546, 555-556.).

8. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

BOARD ACTION
IT IS HEREBY ORDERED THAT:

Effective immediately, Waste Discharge Requirements Order R5-2020-0007 (NPDES CA0079138) is amended as shown in items 1 through 9, below.

1. The Order number is changed from R5-2020-0007 to R5-2020-0007-01 throughout the Order.

2. Cover Page. Modify the Discharge Location information on Table 2 as shown below:

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001A	Tertiary Treated Wastewater Discharged from West-Bank Outfall (prior to fully transitioning discharge to the East-Bank Outfall)	37° 56’ 15” N	121° 20’ 05” W	San Joaquin River
001B	Tertiary Treated Wastewater Discharged from East-Bank Outfall	37° 56’ 6” N	121° 19’ 46” W	

3. Cover Page. Modify the last paragraph to the text shown below:

   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 20 February 2020 and amended by Order R5-2023-0039 on **10 August 2023**.

4. The Discharge point at west-bank and east bank of the San Joaquin River are named DIS-001A and DIS-001B respectively. The monitoring locations at these discharge points are named EFF-001A and EFF-001B respectively and compliance shall be measured at either of the monitoring locations depending on whichever discharge location is in use at that time. This change is carried throughout the permit.

5. Attachment B – Map. The map has been replaced with an updated version that reflects the new reinstated outfall along with the current outfall.

6. Attachment E – Monitoring and Reporting Program (MRP), Section II. MONITORING LOCATIONS. Only sections of the table with changes are shown. Modify Table E-1 Monitoring Station Locations to modify Monitoring Location Description as shown below:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001A	EFF-001A	A location where a representative sample of the effluent from the Facility can be collected from the last connection through which wastes can be admitted to the outfall at Discharge Point 001A.
001B	EFF-001B	A location where a representative sample of the effluent from the Facility can be collected from the last connection through which wastes can be admitted to the outfall at Discharge Point 001B.
--	RSW-001	San Joaquin River, at Bowman Road, approximately located at 37° 57’ 51” N and 121°19’ 24” W.
--	RSW-002	San Joaquin River, approximately 0.5 mile south of DIS-001A or DIS-001B, whichever discharge location is in use at the time the receiving water samples are collected.
--	RSW-002A	San Joaquin River, approximately 0.5 mile north of DIS-001A or DIS-001B, whichever discharge location is in use at the time the receiving water samples are collected.
--	RSW-003	San Joaquin River, at Deep Water Channel, approximately located at 37° 57’ 01” N and 121° 20’ 09” W.

7. Attachment F – Fact Sheet, Section II. FACILITY DESCRIPTION. Include the following at the end of second paragraph of the Facility Description:

   The Facility discharges tertiary treated effluent to the San Joaquin River. The discharge occurs either at the west-bank outfall or the new east-bank outfall being constructed in 2023.

8. Attachment F – Fact Sheet, Section II. FACILITY DESCRIPTION. Modify Section II.B.2 as shown below:

   2. Treated municipal wastewater is discharged at Discharge Point No. 001A (west-bank outfall) or Discharge Point No 001B (east-bank outfall) to the San Joaquin River, a water of the United States within the legal boundary of the Sacramento-San Joaquin Delta. The discharge occurs either at the west bank outfall at latitude 37° 56’ 15” N and longitude -121° 20’ 05” W or at the new east-bank outfall at latitude 37° 56’ 6” N and longitude 121° 19’ 46” W. Discharge from the new east-bank outfall will occur while commissioning the outfall and after the completion of the project, when all discharge will cease from the west-bank outfall.

9. Attachment F – Fact Sheet, Section IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS. Modify Section IV.C.2.c as shown below:

   ii. **San Joaquin River Characteristics.** The Facility discharges to the San Joaquin River within the legal boundary of Sacramento-San Joaquin Delta approximately 1.5 to 2 miles upstream of the Stockton Deep Water Ship Channel. The west-bank outfall consists of a 4-foot diameter pipe located on the west bank of the channel, while the east bank outfall will consist of a 5-foot diameter pipe located on the east bank of the channel. The river width at the outfall locations is approximately 250 feet, and the San Joaquin River depth is approximately 15 to 16 feet at mean low tide. San Joaquin River flow is strongly tidal at the outfall, with flows moving past the outfall several times before the net San Joaquin River flow pushes the water into the Deep Water Ship Channel. South Delta water supply pumping operations affect the San Joaquin River flow at the Facility's outfall. There is a tidal flow measurement station, installed and maintained by the U.S. Geological Survey (USGS), in the San Joaquin River approximately one-half mile upstream of the Facility's east-bank outfall. Based on flow data at the USGS measurement station, the maximum tidal flow is approximately 3,000 cubic feet per second (cfs) during peak flood and ebb tides.

10. Attachment F – Fact Sheet, Section IV, Table F-12. Summary of Water Quality Based Effluent Limits has an added footnote for chlorodibromethane and dichlorobromomethane effluent limits as shown below:

    14. Effluent limitations applicable when discharge occurs at west-bank outfall (DIS-001A)

11. Attachment F – Fact Sheet, Section IV, Table F-14. Summary of Final Effluent Limitations has an added footnote for chlorodibromethane and dichlorobromomethane effluent limits as shown below:

    20. Effluent limitations applicable when discharge occurs at west-bank outfall (DIS-001A)

12. Attachment F – Fact Sheet, Section VIII. PUBLIC PARTICIPATION. Modify Section VIII.G as shown below:

    G. Additional Information

    Requests for additional information or questions regarding this order should be directed to Saranya Elankovan at 916-464-4742 or saranya.elankovan@waterboards.ca.gov.

LATE REVISIONS:

Order R5-2023-0039 had late revisions to clarify the change in outfalls and clearly identify discharge monitoring locations, also adopted on 10 August 2023, and outlined as follows:

1**.** Modify Waste Discharge Requirements (WDRs) Sections VI.C.4.a. and VI.C.4.b as shown below:

a. **Filtration System Operating Specifications.** To ensure the filtration system is operating properly to provide adequate disinfection of the wastewater the turbidity of the filter effluent measured shall not exceed:

i. 2 NTU as a daily average;

ii. 5 NTU more than 5 percent of the time within a 24-hour period; and

iii. 10 NTU, at any time.

Effective immediately, the turbidity of the filter effluent shall be measured at EFF-001A when discharging at Discharge Point No. 001A and at FIL-001 when discharging at Discharge Point No. 001B.

b. **Ultraviolet (UV) Disinfection System Operating Specifications.** When discharging from Discharge Point No. 001B, the UV disinfection system must be operated in accordance with an operations and maintenance program that assures adequate disinfection, and shall meet the following minimum specifications to provide virus inactivation equivalent to Title 22 Disinfected Tertiary Recycled Water:

i. **UV Dose.** The minimum hourly average UV dose in the UV reactor shall be 100 millijoules per square centimeter (mJ/cm^2).

ii. **UV Transmittance**. The minimum hourly average UV transmittance (at 254 nanometers) in the wastewater measured at UVS-001 shall not fall below 55 percent.

iii. The lamp sleeves and cleaning system components must be visually inspected per the manufacturer’s operations manual for physical wear (scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

iv. The lamp sleeves must be cleaned periodically as necessary to meet the UV dose requirements.

v. Lamps must be replaced per the manufacturer’s operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.

2. Attachment E- MRP, modify Sections IV.A.2.k and IV.A.2.l as shown below:

   k. When discharging from Discharge Point No. 001B, monitoring for **chlorine, total residual, and sulfur dioxide/sodium bisulfite** is not required.

   l. When discharging at Discharge Point 001A, **turbidity** shall be monitored at EFF-001A. When discharging at Discharge Point 001B, **turbidity** shall be monitored at FIL-001.

3. Attachment E - MRP, modify Section IX.C.1 as shown below:

   1. **Monitoring Locations UVS-001 and FIL-001.** When discharging from Discharge Point No. 001B, the Discharger shall monitor the filtration system at Monitoring Location FIL-001 and the UV disinfection system at Monitoring Location UVS-001 in accordance with Table E-9 and the testing requirements described in section IX.C.2 below:

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Flow	(MGD)	Meter	UVS-001	Continuous
Turbidity	(NTU)	Meter	FIL-001	Continuous
Number of UV banks in operation	Number	Observation	N/A	Continuous
UV Transmittance	Percent (%)	Meter	UVS-001	Continuous
UV Dose	(mJ/cm 2)	Calculated	N/A	Continuous

End of Amendments

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 CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day.
Links to the laws and regulations applicable to filing petitions
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality) may be found on the Internet or will be provided upon request.

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 August 2023.

Patrick Pulupa Date: 2023.08.25 11:06:00 -07'00'

PATRICK PULUPA, Executive Officer