CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2026-XXXX

AMENDING WASTE DISCHARGE REQUIREMENTS ORDER
R5-2018-0070-001
FOR
CITY OF PATTERSON
CITY OF PATTERSON WATER QUALITY CONTROL FACILITY
STANISLAUS COUNTY

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

## BACKGROUND

1. On 5 October 2018, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order R5-2018-0070, prescribing requirements for the City of Patterson Water Quality Control Facility (WQCF) in Stanislaus County. The City of Patterson (hereafter Discharger) owns and operates the WQCF.

2. The WQCF consists of three separate treatment systems including the North Activated Sludge Treatment System (NASTS), an Advanced Integrated Pond System (AIPS), and the South Activated Sludge Treatment System (SASTS). Undisinfected secondary effluent from each of three treatment systems is discharged to a series of 15 percolation ponds for disposal.

3. WDRs Order R5-2018-0070 Flow Limitations B.1 limited the monthly average influent flow rate to each of the three treatment systems and to the total treatment system (as the sum of the flow rates to each of the treatment systems). Flow Limitations B.2 of WDRs Order R5-2018-0070 described specific revised influent flow rate limits to each of the three treatment systems, and to the total treatment system, following two specific planned upgrades and expansions. The NASTS upgrades would increase the design capacity by 0.2 million gallons per day (MGD), and the Phase III Expansion would increase the capacity by 1.25 MGD, by adding capacity to the SASTS. The revised influent flow rates depend on submission of each successive Wastewater Treatment Facility Phase Completion Report (per Provision G.1.a of WDRs Order R5-2018-0070).

4. On 22 June 2023, WDRs Order R5-2018-0070 was amended by Order R5-2023-0030, and subsequently given the updated order number R5-2018-0070-001, to authorize a 0.2 MGD flow limit increase following the completion of the NASTS upgrades. Consequently, WDRs Order R-2018-0070-001 authorized a flow

increase up to 3.7 MGD following the Phase III upgrades. Flow Limitations B.1 and B.2 were amended as follows:

1. *Monthly average influent flow to the wastewater treatment plant (WQCF) shall not exceed the following:*

***Influent Flow Limits in MGD***

| ***Treatment System*** | ***NASTS*** | ***SASTS*** | ***AIPS*** | ***Total*** |
|---|---|---|---|---|
| *Flow Limits* | *1.0* | *1.25* | *0.2* | *2.45* |

2. *Effective upon approval of each successive Wastewater Treatment Facility Phase Completion Report (per Provision G.1.a), monthly average influent flows to the wastewater treatment plant WQCF) shall not exceed the following:*

***Influent Flow Limits in MGD***

| ***Treatment System*** | ***NASTS*** | ***SASTS*** | ***AIPS*** | ***Total*** |
|---|---|---|---|---|
| *Flow Limits* | *1.0* | *2.5* | *0.2* | *3.7* |

**MAY 2025 REPORT OF WASTE DISCHARGE**

5. On 16 May 2025, the Discharger submitted a Report of Waste Discharge (RWD) Addendum describing changes to the Phase III upgrades. The Discharger determined during planning and design that the expansion and water quality goals would be better met by adding treatment capacity to the NASTS rather than adding capacity to the SASTS. The Phase III improvements will still increase the total design flows of the WQCF to 3.7 MGD by adding 1.45 MGD of capacity to the NASTS and decreasing treatment capacity of the AIPS from 0.2 to 0 MGD.

6. The Phase III improvements include installing four Membrane Bioreactor (MBR) treatment trains in the NASTS, upgrading the headworks with new bar screens and a grit washer, installing a new dewatering screw press and paved solids storage area, converting the existing NASTS clarifiers to recycled water storage, and transitioning the three AIPS ponds to be used only for emergency storage of screened influent.

7. The RWD Addendum concluded that the changes to the planned treatment upgrades will not impact the antidegradation analysis included in Order R5-2018-0070-001 as water quality will be similar to or better than the current projected

water quality, and that the improvements go beyond the measures listed as best practicable treatment or control (BPTC) in the WDRs.

## NITRATE CONTROL PROGRAM

8. WDRs Order R5-2018-0070-001, Finding No. 44 states:

> *For the Nitrate Control Program, the WQCF falls within Groundwater Basin 5-022.07 (San Joaquin Valley – Delta-Mendota Sub-basin), a Priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued to dischargers by 2025. No action with respect to the Nitrate Control Program is required of the Discharger at this time. Once the Notice to Comply letter is issued, dischargers that are unable to comply with conservative nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers may comply with the nitrate control program either individually or collectively with other dischargers.*

9. On 13 May 2024, the Discharger filed a Notice of Intent to comply with Pathway B under the Central Vally Salinity Alternatives for Long-Term Sustainability (CV-SALTS) Nitrate Control Program.

## CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

10. In accordance with CEQA, Public Resources Code section 21000 et seq., the City of Patterson, as lead agency, approved a Mitigated Negative Declaration (MND) for the Water Quality Control Facility Expansion Phase III (SCH: 2010042038) on 10 May 2018. The project describes expansion of the treatment system and improvements to the screening and solids processes at the WQCF. The Central Valley Water Board, as a “responsible agency” under CEQA, was consulted in the lead agency’s development of the MND (SCH: 2010042038). The discharges and other activities authorized under this Order also fall within the scope of the proposed project (as contemplated in the MND). Additionally, there are no substantial changes to either the proposed project or the attendant circumstances under which the proposed project will be undertaken, and no new information requiring revision of the MND. The MND is therefore conclusively presumed compliant with CEQA for use by the Central Valley Water Board as a “responsible agency” under CEQA. (See Cal. Code Regs., tit. 14, § 15162.) Accordingly, no further environmental review is required under CEQA.

11. This Order implements all applicable mitigation and monitoring measures specified in the MND.

12. To the extent that the construction of any new basins, ponds, surface impoundments, and/or use of existing irrigated lands as new LAAs are authorized under this Order, such features involve minor alterations to land, which are exempt

from CEQA procedural requirements pursuant to California Code of Regulations, title 14, section 15304 (CEQA Guidelines).

**Public Notice**

13. 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 for a public hearing and an opportunity to submit their written views and recommendations.

14. The Central Valley Water Board, in a public meeting, heard, and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED**, pursuant to Water Code sections 13263 and 13267, that Order R5-2018-0070-001 is amended as follows:

1. The Order number is changed from R5-2018-0070-001 to R5-2018-0070-002 throughout the document.

2. The following sentence shall be added to Finding 1:

   An addendum to the RWD was submitted on May 16, 2025.

3. The following sentence shall be added to Finding 9:

   For the Phase III upgrades in 2025 to 2027, a Membrane Bioreactor (MBR) system is being added adjacent to the anoxic tank to increase the NASTS capacity to 2.45 MGD and the secondary clarifiers will be repurposed for recycled water storage.

4. The following sentence shall be added to Finding 10:

   Following completion of the Phase III upgrades, the AIPS will be transitioned for use only as backup emergency storage of influent that cannot be stored in the WQCF's existing emergency storage basin. Influent will be returned to the headworks for treatment.

5. The following sentence shall be added to Finding 12:

   Following completion of the Phase III upgrades, biosolids will primarily be dewatered with a new screw press.

6. The following sentence shall be added to Finding 13:

   The drying beds are now only used in an emergency when the centrifuge must be shut down for extended maintenance or to temporarily unload Vactor truck debris.

7. The following sentence will be added to Finding 14:

   Additionally, biosolids will be stored onsite at a new concrete-lined biosolids lay-down area that drains to the headworks upon completion of the Phase III upgrades.

8. The table in Finding 15 will be updated to list "Emergency Storage" as the function for the AIPS Primary, Secondary and Tertiary ponds. Footnote 3 is added to the table, stating "AIPS Ponds function will transition from treatment to emergency storage following completion of the Phase III upgrades."

9. Finding 19 shall be amended as follows:

   ~~Currently, each of NASTS, AIPS and SASTS has its own point of compliance and discharge limitations.~~ In 2018, ~~T~~the Discharger proposed to blend effluent from the three treatment systems prior to discharge to the disposal ponds, so that effluent can be regulated as a single point of compliance at the South Effluent Pump Station. Blending effluent will combine low quality effluent from the AIPS with high quality effluent from the NASTS and SASTS. Based on the effluent data collected from 2014 through 2016, the effluent from AIPS contributed about 11 percent of total flow from the three treatment systems. After completion of the ~~proposed expansion~~ NASTS upgrades, the AIPS will only make up five percent of permitted capacity. Following the Phase III upgrades, effluent quality will only be a blend of NASTS and SASTS effluents. The projected blended effluent quality is presented below:

**Projected Blended Effluent Quality**

| Constituent | Pre-Phase III Concentrations[2] | Post-Phase III Concentrations[3] |
|---|---|---|
| BOD (mg/L) | 9.7 (15[1]) | 2.0 |
| TSS (mg/L) | 8.8 (7.3[1]) | 1.1 |
| Total Nitrogen (mg/L) | 4.5 (7.2[1]) | 3.0 |
| Nitrate as N (mg/L) | 0.9 | 0.2 |
| TKN (mg/L) | 3.6 | 2.8 |
| TDS (mg/L) | 1,204 | Not modeled[4] |
| EC (µmhos/cm) | 1,872 | Not modeled[4] |
| Chloride (mg/L) | 295 | Not modeled[4] |
| Sodium (mg/L) | 252 | Not modeled[4] |
| pH | 7.8 | 7.3 |

1. Commingled effluent avg. of the trial basis samples from the

NASTS, SASTS and AIPS from January 2014 through December 2015.
2. Effluent flow-weighted avg. from 3 treatment systems from January 2014 through December 2016.
3. Effluent flow-weighted avg. from SASTS and BioWin-Modeled NASTS effluent quality, based on post-Phase III upgrades permitted flows.
4. Parameter not modeled, but concentrations Post-Phase III are not anticipated to differ from Pre-Phase III.

10. Finding 20 shall be replaced with the following:

The City proposes two projects to increase the WQCF's capacity:

a. NASTS Upgrades— Completed in 2022 as reported in the 20 July 2022 NASTS Capacity Increase Report submitted by the discharger on 5 August 2022.

b. Phase III Expansion—The Phase III expansion will increase the treatment capacity of the NASTS from 1.0 MGD to 2.45 MGD. The expansion was originally described in WDRs Order R5-2007-0147 but had been put on hold following the downturn in the housing market. The City anticipates beginning the project in 2025 and plans to complete construction in 2027. Major improvements associated with the Phase III Expansion are listed below, and also depicted in Attachment C.

**Phase III—Major Improvements**

| | |
|---|---|
| **New Headworks** | The existing distribution header for the NASTS and SASTS, located downstream of the 5 mm bar screen, will be plumbed to a new headworks with two 2 mm center flow band screens with a grit washer compactor system. Flow will be split to the NASTS and SASTS at a new distribution header downstream of the new band screens. Manually controlled gates allow emergency flows to Pond 1 and AIPS. |
| **NASTS Oxidation Ditch** | Replace brush aerators with submersible mixers and submersible aeration diffuser grids for biological treatment. Install new aeration blowers to supply air to the diffusers. The NASTS anoxic tank will be retained. |
| **NASTS MBR System** | A new MBR structure will be constructed, adjacent to the existing anoxic tank, and will contain three MBR trains. WAS from the NASTS will be pumped out of the MBR system to the SASTS digesters. |
| **NASTS Clarifiers (2) and Recycled Water** | The two existing circular secondary clarifiers at the NASTS will be repurposed for use as recycled water storage. Recycled water will be disinfected with chlorine, and a new chemical building will be constructed. The existing RAS/WAS station will be repurposed to pump recycled water throughout the WPCF. |
| **SASTS** | The south splitter box will be modified to receive screened flow from the new headworks. The south effluent pump station will be modified to receive effluent flow from the NASTS MBR. |
| **Biosolids dewatering screw press** | A new dewatering screw press will be installed in a new dewatering building located within the footprint of the new sludge dewatering and storage area. Solids from the existing digesters will be dewatered with this unit. The existing centrifuge and concrete-lined sludge drying beds will only be used for backup. |
| **Biosolids Dewatering and Storage Area** | Installation of an additional 2.5-acre area for short term storage of dewatered solids. The area will be paved with Portland concrete (reinforced with #3 rebar mesh). The areas is graded so that drainage and runoff will be collected and returned to the influent pump station. |

The 2025 RWD Addendum indicated that the NASTS upgrades and the Phase III improvements will produce effluent with both BOD and TSS less than 20 mg/L, and total nitrogen less than 10 mg/L. Effluent quality will be even higher following the Phase III upgrades.

11. Finding 21 shall be amended as follows:

The existing and proposed design capacities of each process (after completion of improvement and expansion) ~~is~~ are as follows:

| Process Treatment | Existing Design Capacity (MGD) | Proposed Design Capacity | |
|---|---|---|---|
| | | After NASTS Upgrades (MGD) | After Phase III Expansion (MGD) |
| NASTS | 0.8 | 1.0 | ~~1.0~~ 2.45 |
| SASTS | 1.25 | 1.25 | ~~2.5~~ 1.25 |
| AIPS | 0.2 | 0.2 | ~~0.2~~ 0.0 |
| Total | 2.25 | 2.45 | 3.7 |

12. Findings 44.a through d shall be replaced entirely with the following findings:

a. Under the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O) to develop a long-term salinity strategy for the Central Valley. The Discharger was issued an identification number for the Salt Control Program (CV-SALTS ID 2358). Dischargers received a Notice to Comply with instructions and obligations for the Salt Control Program within one year of 17 January 2020, the effective date of the amendments. The Discharger elected to participate in the P&O Study and is currently in good standing with the program. This Order sets a Performance-Based Salinity Limit for TDS of 1,250 mg/L as an annual average.

b. The Nitrate Control Program is a prioritized program. The WQCF falls within Groundwater Basin 5-022.07 (San Joaquin Valley – Delta-Mendota Sub-basin), which is a Priority 2 Basin. Notices to Comply for Priority 2 Basins were issued to dischargers in December 2023 and dischargers had until February 2025 to respond to the notice. These notices provided dischargers with a choice to participate in an individual permitting approach (Pathway A) or in a collective permitting approach (Pathway B). The Discharger filed a

Notice of Intent on 13 May 2024, and selected Pathway B (compliance within a management zone). The Discharger is participating in the Delta-Mendota Management Zone. This Order requires the Discharger to comply with a Total Nitrogen limit of 10 mg/L upon completion of the Phase III upgrades.

c. Under the Nitrate Control Program, dischargers that cause or contribute to nitrate pollution in groundwater may apply, individually or collectively, for a limited term “exception” from meeting nitrate limits. Compliance time schedules must be as short as practicable and are not to exceed 35 years. The Central Valley Water Board will only grant exceptions upon finding that all elements of the Board’s Exceptions Policy are met. For nitrate, the Exceptions Policy dictates that exceptions will not be considered unless an adequate supply of clean, safe, reliable and affordable drinking water is available for those who have been adversely affected by the non-compliant discharge. The WDRs do not preclude the WQCF from applying for and transitioning to Pathway A in the future, provided the WQCF qualifies for Pathway A and satisfies its application requirements.

d. A Preliminary Management Zone Proposal for the Delta-Mendota Management Zone was submitted in December 2024, and the Central Valley Water Board provided comments for consideration during development of a Final Management Zone Proposal (FMZP). The FMZP was submitted to the Central Valley Water Board on 16 February 2026.

e. Management Zones in Priority 2 Basins are required to submit Management Zone Implementation Plans (MZIPs) six months after the Final Management Zone Proposal (FMZP) is accepted by the Central Valley Water Board’s Executive Officer. The MZIP is required to include a proposal for how dischargers within the Delta-Mendota Management Zone will meet requirements of the Nitrate Control Plan and the Exceptions Policy. The MZIP will serve as the basis for permit amendments for all dischargers in the Management Zone. The Board may propose to consider a package of permit amendments for all dischargers in the Management Zone in a single permitting action, where the Board will also make findings as to whether the requirements of the Exception Policy are met by the proposals in the MZIP.

f. As these salt and nitrate control strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met. This Order may be amended or modified to incorporate newly applicable requirements. More information regarding this regulatory planning process can be found on the Central Valley Water Board's CV-SALTS website (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity).

13. The following sentence shall be added to finding 47.b:

    Following the Phase III upgrades, total nitrogen concentrations in the blended effluent are estimated to be 3 mg/L, based on the effluent flow-weighted average from the SASTS and BioWin-modeled NASTS effluent quality.

14. Finding 49.f. shall be added:

    f. Elimination of the AIPS following Phase III upgrades.

15. Flow Limitations B.2. of WDRs Order R5-2018-0070-001 shall be amended as follows:

    2. ~~Effective upon approval of each successive *Wastewater Treatment Facility Phase Completion Report* (per Provision G.1.a.),~~ The Phase III upgraded facility monthly average influent flows to the wastewater treatment plant (WQCF) systems shall not exceed the following:

**Influent Flow limits, in MGD**

| Treatment System | NASTS | SASTS | ~~AIPS~~ | Total |
|---|---|---|---|---|
| After Completion of Phase III Expansion | ~~1.0~~ 2.45 | ~~2.5~~ 1.25 | ~~0.2~~ | 3.7 |

16. Effluent Limitations C. shall be amended as follows:

    Blended effluent ~~from the NASTS, AIPS and SASTS~~ discharged to WQCF percolation ponds shall not exceed the following limits:

| Constituent | Units | Limit | Basis for Compliance Determination |
|---|---|---|---|
| $BOD_5$ [1] | mg/L | 23 | Monthly Avg. |
| Total Dissolved Solids | mg/L | 1,250 | Annual Avg. |
| Total Nitrogen | mg/L | 12 [2] / 10 [3] | Annual Avg. |
| Total Suspended Solids | mg/L | 23 | Monthly Avg. |

1 5-day biochemical oxygen demand at 20˚C.
2 Prior to completion of Phase III Expansion.
3 After completion of Phase III Expansion. ~~Effective on the date of approval of flow limit increase.~~

17. Groundwater Limitations E. shall be amended for consistency with CV-SALTS as follows:

Release of waste constituents from any portion of the facility shall not cause or contribute to groundwater ~~to~~ containing concentrations in excess of the concentrations specified below, or natural background groundwater quality, whichever is greater:

~~1. Contain any of the specified constituents in a concentration statistically greater than the maximum allowable concentration tabulated below.~~

| ~~Constituent~~ | ~~Maximum Allowable Concentration~~ |
|---|---|
| ~~TDS~~ | ~~Current groundwater quality[1]~~ |
| ~~Sodium~~ | ~~Current groundwater quality[1]~~ |
| ~~Chloride~~ | ~~Current groundwater quality[1]~~ |
| ~~Nitrate as Nitrogen~~ | ~~Current groundwater quality[1] or 10mg/L, whichever is greater~~ |

~~1 "Current groundwater quality" means the quality of groundwater as evidenced by monitoring completed as of the date of this Order for each well.~~

1.~~2~~. Exceed a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.

2.~~3.~~ C~~ontain constituents in c~~oncentrations that exceed either the Primary or Secondary MCLs established under Title 22, excluding salinity provided the Discharger complies with the Salt Control Program.

3.~~4.~~ Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

The above requirements apply to all onsite wells except Well MW-2. Compliance with these limitations shall be determined annually as specified in the Monitoring and Reporting Program using approved statistical methods defined in the approved Groundwater Limitations Compliance Assessment.

18. Other Provisions G.1.a. shall be amended as follows:

1. The following reports shall be submitted pursuant to Water Code section 13267 and prepared in accordance with section G.4 of this Order.

a. ~~At least~~ Within 60 days ~~prior to a planned flow limit increase~~ of completing the Phase III upgrades, the Discharger shall submit a **Wastewater System Improvements and Expansion Report** documenting the construction of new treatment systems. The report shall certify that the structures are fully functional and ready to receive wastewater in compliance with the requirements of this Order. The report shall include as-built drawings and capacities of the new treatment systems.

~~The report shall be approved by the Central Valley Water Board before the Discharger increases the influent flow rate.~~

19. Attachments B and C are modified are replaced with an updated site plan and process schematic, respectively.

20. The last paragraph of text in the Order shall be amended as follows:

I, PATRICK PULUPA, Executive Officer, hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on 5 October 2018, and amended on 22 June 2023 and XX December 2026.

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 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 of this Order, 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. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality 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 December 2026.

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PATRICK PULUPA, Executive Officer