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CENTRAL VALLEY REGION

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[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-2026-####

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	TENTATIVE
Program:	Non-15
Region 5 Office:	Fresno
Discharger:	City of Firebaugh
Facility:	Firebaugh Wastewater Treatment Facility
Address:	8000 Helm Canal Road, Firebaugh, CA 93622
County:	Fresno County
Parcel Nos.:	007-100-22ST, 007-100-25ST, 007-100-26ST
GeoTracker ID:	WDR100028275
Prior Order(s):	79-19, 92-227, 98-230

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____ April 2026.

_____

PATRICK PULUPA,
Executive Officer

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GLOSSARY

Antidegradation Policy	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
APN	Assessor's Parcel Number
Basin Plan	Water Quality Control Plan for [BASIN]
Bgs	Below Ground Surface
BOD_5	[Five-Day] Biochemical Oxygen Demand at 20° Celsius
BPTC	Best Practicable Treatment and Control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq.
CEQA Guidelines	California Code of Regulations, Title 14, section 15000 et seq.
C.F.R.	Code of Federal Regulations
CIMIS	California Irrigation Management Information System
COC[s]	Constituent[s] of Concern
DO	Dissolved Oxygen
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EC	Electrical Conductivity
EIR	Environmental Impact Report
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
IPP	Industrial Pretreatment Program
HDPE	High Density Polyethylene
lbs/ac/yr	Pounds per Acre per Year

GLOSSARY

µg/L	Micrograms per Liter
µmhos/cm	Micromhos per Centimeter
MG[D]	Million Gallons [per Day]
mg/L	Milligrams per Liter
MND	Mitigated Negative Declaration
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
MW	Monitoring Well
MCL	Maximum Contaminant Level per Title 22
N	Nitrogen
ND	Non-Detect
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
RAS	Return Activated Sludge
Recycled Water Policy	Policy for Water Quality Control for Recycled Water, State Water Board Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057
R[O]WD	Report of Waste Discharge
RCRA	Resource Conservation and Recovery Act
SPRRs	Standard Provisions and Reporting Requirements
TDS	Total Dissolved Solids
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23
Title 27	California Code of Regulations, Title 27

GLOSSARY

TSS	Total Suspended Solids
Unified Guidance	Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)
USEPA	United States Environmental Protection Agency
WAS	Waste Activated Sludge
WDRs	Waste Discharge Requirements
WTP	Water Treatment Plant
WWTF	Wastewater Treatment Facility
WQO[s]	Water Quality Objective[s]

FINDINGS

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) hereby finds as follows:

Introduction

1. The City of Firebaugh (City or Discharger) owns and operates the Firebaugh Wastewater Treatment Facility (WWTF or Facility), which is located approximately three miles southeast of the City of Firebaugh in Fresno County, Section 33, Township 12S, Range 14E, Mount Diablo Base and Meridian (MDB&M). The Facility property includes approximately 151 acres of Use Areas that are operated by Tomtaek, Inc. The Facility's location is depicted on the Site Location Map in **Attachment A**.The Facility is comprised of the following Fresno County Assessor Parcel Numbers (APNs): 007-100-22ST, 007-100-25ST, and 007-100-26ST.

2. The WWTF was previously regulated by Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP) Orders 98-230, which were adopted by the Central Valley Water Board on 11 December 1998. WDRs Order 98-230 authorized a monthly average discharge of up to 1.5 million gallons per day (mgd) of undisinfected secondary wastewater from three treatment ponds to eleven evaporation/percolation ponds and 106 acres of farmland owned by the City.

3. In November 2023, the Discharger submitted an updated report of waste discharge (RWD) that proposed changes at the Facility to address violations resulting from the current treatment system. The Facility's upgrades proposed in the RWD are intended to improve the effluent quality and support expanded reclamation use. The RWD and subsequent submittals are discussed in more detail below.

4. As Facility's owner and operator, the City is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.

5. The following materials are attached and incorporated as part of this Order:

    a. Attachment A – Project Location Map

    b. Attachment B – Project Site Map

    c. Attachment C –Site Plan with Groundwater Monitoring Wells and Groundwater Elevation Contours

    d. Attachment D – Current Use Areas

e. Attachment E – Proposed Process Flow Diagram

f. Standard Provisions & Reporting Requirements Dated 1 March 1991

g. Information Sheet

6. Also attached is **Monitoring and Reporting Program R5-2026-####** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs. Compliance with the MRP and subsequent revisions thereto.

7. Wastewater treatment systems at the Facility are proposed to be modified, which will change operations at the Facility. WDRs Order 98-230 is outdated and does not reflect the proposed changes. Revised WDRs are needed for this Facility to reflect proposed operations at the Facility and ensure the discharge meets the requirements of current water quality plans and policies.

Facility and Regulatory History

8. The City and Tomatek, Inc. (Tomatek) jointly operate a tomato waste treatment facility (Tomato Plant) located within the WWTF property dedicated to Tomatek's tomato processing wastewater. The treatment of domestic and industrial wastewater are handled separately, and the discharges are not comingled. During the tomato processing season, which typically lasts up to 90 days from late June through September or early October, the Tomato Plant receives up to 2.16 mgd of tomato processing wastewater from Tomatek's processing facility. Tomatek's discharge is regulated by WDRs Order R5-2019-0073.

9. Prior to 2002, tomato processing wastewater was applied directly to approximately 100 acres of cotton fields within the Use Areas. Cotton production was discontinued in 2002 due to wastewater acidity, ponding caused by the accumulation of tomato solids, and increased volumes of processing wastewater. Following the determination that cotton farming was no longer economically feasible, additional Use Areas were developed, and tomato processing wastewater began undergoing sodium hydroxide neutralization prior to land application.

10. Since 2014, Tomato Plant wastewater has been applied to one Use Area at a time. Once the appropriate volume of effluent has been applied, it is directed to the next site. This rotation typically takes two to three weeks to complete and is then repeated. Use Area site six is primarily used after two rotations, as its sandier soil provides additional disposal capacity.

11. In 2014, City Ponds 10A and 10B were converted to a settling pond system for tomato processing wastewater, and Tomatek implemented improvements to the quality of its process wastewater. These changes allowed irrigation of the Use

Areas to resume, as permitted by WDRs Order R5-2019-0073. Since 2014, the lessee farmer has cultivated hybrid Sudan grass for sheep forage on the Use Areas. Tomatek is currently evaluating options for the treatment and disposal of its processing wastewater, including implementing additional treatment.

12. On 16 December 2021, Central Valley Water Board staff sent a Notice of Violation to the City for 170 violations of discharge specifications and reporting requirements for the period of 1 January 2015 through 30 September 2021. The majority of violations included exceedances of the monthly flow average and monthly and daily maximum effluent limits for BOD and TSS, and also included exceedances of pond dissolved oxygen limits, and deficient/or late monitor reporting.

13. On 10 November 2023, the City of Firebaugh (Discharger) submitted a Report of Waste Discharge (RWD) and Title 22 Engineering Report, and a copy of a signed Form 200 proposing upgrades to the WWTF to address violations. The technical report was prepared by Gouveia Engineering Inc. but was not signed or stamped by a registered professional engineer. On 29 November 2023, Alfonso Manrique (RCE 63673) with AM Consulting Engineers (AMCE) submitted a signed/stamped copy of the RWD on behalf of the Discharger.

14. On 8 December 2023, Central Valley Water Board staff (Staff) determined the November 2023 RWD was incomplete. In addition, Staff requested for the submittal of a Pond Design Report, Construction Quality Assurance Plan (CQA Plan), Operations, Maintenance, & Monitoring Plan (OM&M Plan), and a timeline for submitting a Post-Construction Report. On 9 February 2024, the Discharger submitted a technical memorandum (February 2024 Technical Memo), prepared and signed by Alfonso Manrique, to address the outstanding issues in the November 2023 RWD; however, the memo did not include an Antidegradation Analysis requested in Staff's 8 December 2023 letter. On 31 May 2024, AMCE provided an updated RWD that included a new proposed effluent disposal plan, in which the City will utilize approximately 150.5 acres for reclamation while 16.5 acres will be used for percolation. The revised May 2024 RWD also included updated water balances that were developed in coordination with Tomatek to ensure the feasibility of disposing effluent for both entities.

15. On 27 June 2024, Staff determined that the May 2024 Revised RWD was incomplete due to issues with storage requirements at current and permitted flows. In addition, Central Valley Water Board staff expressed concerns that the proposed ponds would not meet the minimum five-foot separation required between the bottom of the ponds and potential high groundwater. Staff also requested that the Discharger provide calculations to establish organic, nutrient, and salt loading for the Use Areas in relation to the discharge for both the City and Tomatek. Additionally, crop uptake requirements were needed to be considered in loading calculations to ensure application at agronomic rates.

AMCE provided the requested information in a 26 August 2024 Technical Addendum.

16. On 11 July 2024, the Division of Drinking Water (DDW) reviewed and approved the Title 22 Engineering Report.

17. The Discharger submitted a Construction Quality Assurance Plan in September 2024 which outlined procedures and requirements for ensuring the quality and integrity of the of the installation of the proposed lined effluent storage ponds at the Facility.

18. On 26 September 2024, Staff notified the Discharger that the May 2024 RWD and subsequent submittal(s) provided sufficient information to draft WDRs. However, due to potential funding issues, the Discharger submitted a revised RWD with a reduced scope of work on 1 July 2025. After several discussions with the Division of Financial Assistance (DFA), it was determined that the Discharger would be allocated sufficient funding to pursue the original scope of work, as described in the May 2024 Revised RWD and associated technical information.

19. On 2 December 2025, AMCE submitted an updated set of conforming plans to address the installation of treatment structures in shallow groundwater.

Facility and Discharges

Existing Facility and Discharges

20. The WWTF serves the City of Firebaugh and treats and disposes domestic wastewater from residential and commercial sources. Currently, there are no significant industrial wastes being discharged, and/or proposed for discharge to the WWTF. Consequently, an Industrial Pretreatment Program will not be required at this time (see Industrial Pretreatment Considerations section below for more discussion).

21. Based on 2020 Census data, the City of Firebaugh serves an estimated population of 8,096. The City is a severely disadvantaged community with a median household income (in 2023) of $47,594, according to the United States Census Bureau.

22. According to the May 2024 RWD, the sewer collection system consists of mains ranging in diameter from six to fifteen inches and seven lift stations. The WWTF is located uphill from most of the distribution system and is fed from a 15-inch force main that runs south from the intersection of 7th Street and Canal Road. Improvements were made to each of the seven lift stations in 2007.

23. The WWTF was originally constructed in 1978 and consisted of a headworks, an aeration pond, polishing ponds, evaporation/percolation ponds relying on natural sand filtration. The WWTF was expanded in 1999 to increase its average dry weather flow capacity from 0.5 mgd to 1.5 mgd and its peak flow capacity to 3 mgd. The expansion included the addition of two partially mixed aerated lagoons, a larger polishing pond, and additional filter percolation ponds.

24. The existing WWTF features a headworks with an auger screen, two partially mixed aerated ponds, a partially-mixed polishing pond, 1.8 acres of unlined sludge drying beds, and eleven percolation ponds. Much of the sludge drying bed area was converted to a solar farm between 2018 and 2021.

25. Influent wastewater enters the headworks through a 12-inch pipeline. The headworks were upgraded in 2008 to include a magnetic flowmeter and an auger screen, with a design capacity of 4.5 mgd. In 2014, an additional auger screen was installed in the bypass channel to improve screening performance, while the 2008 auger screen remains in service as a backup. Screenings are collected in a dumpster that is emptied weekly. Up to one-third of the screened influent may be diverted to the decommissioned western treatment plant via a splitter box. The decommissioned plant consists of the partial-mix ponds and polishing pond. An influent sampler is also installed at the headworks.

26. Screened wastewater flows by gravity through a 21-inch pipeline to a valve box located in the levee separating the two partially-mixed aeration ponds. The valve box controls two 15-inch influent pipelines and includes a bypass valve that allows screened wastewater to be diverted directly to the polishing pond via a 21-inch pipeline. An 18-inch pipeline connects the two basins and is regulated by a valve located east centerline of the levee. Each partial-mixed pond is about 11.5 feet deep and provides a treatment volume of 2 million gallons (MG).

27. Effluent from the aerated ponds is then directed to the polishing pond, which is approximately 10.5 feet deep and provides a treatment volume of 5.4 MG. Curtain baffles divide the polishing pond into four zones. Currently, four 5-HP aerators are installed in two zones to provide additional oxygen for polishing, while the remaining zones allow settling of suspended solids. Uncontrolled algae growth, even during winter, has contributed to elevated effluent BOD and TSS levels. The increased solids loading can also reduce the performance of the filter percolation beds.

28. Secondary effluent from the polishing pond overflows into a surface weir through a 21-inch pipe and enters a hydraulic control structure on the eastern levee. Two gates control the flow of effluent to eleven percolation ponds that encompass a surface area of 15 acres. According to the May 2024 RWD, the City only utilizes one percolation pond for effluent disposal.

29. The May 2024 RWD states that approximately 151 acres of the City's Use Areas were developed for the land disposal of Tomatek's process wastewater. A nearby 9.7-acre storm drainage pond, used for a nearby home subdivision near the WWTF, is utilized as an additional Use Area during the summer when not inundated with stormwater runoff. The existing Use Areas are summarized in **Table 1** below.

Table 1 – Existing Use Areas

Area	Acres
Use Area 1	35.5
Use Area 2	11
Use Area 3	15.8
Use Area 4	50
Use Area 5	26
Use Area 6	12.2
Storm Pond	9.7

30. Recent monitoring data from January 2023 to October 2025 indicates that the average effluent flows at the WWTF range from 0.49 mgd to 0.74 mgd as shown in **Table 2** below. As of January 2026, the Central Valley Water Board has not yet received data for November and December 2025.

Table 2 – Effluent Flows (in mgd)

Month	2023	2024	2025
January	0.56	0.49	0.50
February	0.53	0.50	0.52
March	0.65	0.54	0.55
April	0.68	0.55	0.53
May	0.69	0.55	0.55
June	0.74	0.59	0.56
July	0.60	0.58	0.58
August	0.58	0.57	0.58
September	0.59	0.58	0.58
October	0.59	0.54	0.59
November	0.56	0.55	---
December	0.51	0.53	---
Total Annual Volume (Million Gallons)	*220*	*200*	*197*

31. Flows appear to consistently exceed the monthly average dry-weather flow limit of 0.5 mgd. As mentioned in the compliance history section below, during 2015 through 2021, the Facility exceeded the flow limit 77 times. Proposed upgrades are expected to address flow violations.

32. The following data for the Facility was collected as required by MRP 98-230. In addition, quarterly samples were collected for standard minerals. The following data is generally from the monitoring period of January 2023 through December 2025. Recent effluent data collected from the WWTF, presented in **Table 3,** indicates the treatment system currently provides BOD and TSS removal up to 89 and 88 percent, respectively.

Table 3 – BOD and TSS Data

Month-Year	BOD Influent (mg/L)	BOD Effluent (mg/L)	BOD Removal (%)	TSS Influent (mg/L)	TSS Effluent (mg/L)	TSS Removal (%)
Q1 2023	185.8	23.0	87.5	153.9	25.8	82.5
Q2 2023	174.5	24.3	85.8	136.7	69.8	48.2
Q3 2023	274.3	55.7	80.1	145.1	74.7	49.2
Q4 2023	219.2	35.0	84.4	199.9	67.3	62.3
Q1 2024	224.0	35.3	84.3	166.3	39.5	75.2
Q2 2024	194.3	33.7	82.5	170.2	65.1	60.2
Q3 2024	202.2	27.7	86.5	196.2	44.8	77.9
Q4 2024	216.8	31.0	85.8	185.2	35.2	81.0
Q1 2025	228.2	32.7	85.6	169.2	19.5	88.4
Q2 2025	205.0	28.3	86.3	166.7	32.6	80.4
Q3 2025	194.8	20.7	89.3	207.7	30.5	85.5
Q4 2025	160.0	21.0	86.9	172.5	22.0	87.2

33. Weekly influent quality samples are required to be collected for BOD and TSS, as shown in the table above. However, the Discharger has sampled influent for additional constituents not required by MRP 98-230. Data for these constituents are summarized in **Table 4** below.

Table 4 – Influent Quality for Additional Constituents

Parameters	Units	2023	2024	2025
Alkalinity as $CaCO_3$	mg/L	340	333.3	320
Bicarbonate as $CaCO_3$	mg/L	340	333.3	320
Chloride	mg/L	247.5	270	260
EC	µmhos/cm	2,300	2,040	2,810
Ammonia as N	mg/L	28	40.7	46.5
Nitrate as NO_3	mg/L	ND	ND	ND

Parameters	Units	2023	2024	2025
Sulfate as SO_4	mg/L	84.5	89	108
Boron	ug/L	707.5	630	500
Calcium	mg/L	50.2	41.7	45
Iron	ug/L	602.5	816.7	413
Sodium	mg/L	217.5	216.7	226.7
Hardness as $CaCO_3$	mg/L	205	160	180

34. Reported effluent data for required constituents (EC, TSS, TDS, and standard minerals) are summarized in **Table 5** below.

Table 5 – Effluent Quality for Additional Constituents

Parameters	Units	2023	2024	2025
Alkalinity as $CaCO_3$	mg/L	315	313.3	313.3
Bicarbonate as $CaCO_3$	mg/L	315	313.3	313.3
Chloride	mg/L	242.5	286.7	253.3
EC	µmhos/cm	1,994	1,744	1,853
TDS	mg/L	850	890	906
Ammonia as N	mg/L	30.5	39	45.5
Nitrate as NO_3	mg/L	ND	ND	ND
Sulfate as SO_4	mg/L	152.5	156.7	119.7
Boron	ug/L	722.5	583.3	500
Calcium	mg/L	46	38.3	46
Iron	ug/L	155	112.3	630
Sodium	mg/L	212.5	206.7	216.7
Hardness as $CaCO_3$	mg/L	192.5	150	186.7

35. According to the May 2024 RWD, solids or sludge accumulate in partial mix ponds and occasionally removed by dewatering and pumping the sludge to the sludge drying beds.

36. Stormwater at the Facility is directed to a stormwater pond with a capacity of 48.5 acre-feet. Additionally, berms are present around the perimeter of each Use Area to prevent overflow of water onto adjacent properties, and levees are also present at the Facility boundaries to further prevent stormwater from running off or onto the Facility. The RWD also states that areas will be graded flat to prevent ponding. Also, the application of reclaimed water to Use Areas will cease 24 hours before a storm and will not resume until at least 24 hours after the storm has ended. The Facility has a stormwater pond with a capacity of 48.5 acre-feet.

Proposed Changes to Facility

37. The City has proposed upgrades to the WWTF to modify the current treatment process to an extended aeration activated sludge system with biological nutrient removal. The upgraded system is designed to treat up to 1.5 mgd, with a peak flow of 3 mgd. Upgrades include conversion of the polishing pond to an extended aeration activated sludge basin and the addition of two clarifiers, a new sludge pumping station, artificial media drying beds, and a sludge drying basin. The sludge drying bed will be installed with a six-inch concrete bottom and eight-inch concrete walls and equipped with drains that return leachate to the extended aeration activated sludge basin. Additionally, several existing percolation ponds will be consolidated, excavated, and lined to create storage ponds for treated effluent intended for irrigation use. The Facility will produce undisinfected secondary effluent, which will be disposed of through a combination of agricultural reuse and percolation. Detailed discussion of these upgrades is provided in the following findings. A site map that identifies proposed project upgrades is provided as **Attachment B**.

38. The existing influent screen will be retained as part of the proposed treatment process, and a second influent screen will be added to provide redundancy. The existing splitter box downstream of the screens will be modified to convey the full influent flow to the proposed extended aeration activated sludge basin via an 18-inch effluent pipeline. The splitter box will also be recoated.

39. The proposed extended aeration activated sludge basin will be constructed within the former polishing pond located on the eastern portion of the site. This new aeration basin will be excavated to increase the depth from 8 feet to 14 feet, and the excavated material will be used to construct an embankment along the west side of the basin. The existing concrete liner will be removed and re-lined with concrete at a depth of six inches. The extended aeration activated sludge basin will be equipped with an aeration system consisting of aeration chains with suspended fine-bubble diffusers and will be designed to provide biological nutrient removal. Dimensions for the extended aeration activated sludge basin are provided in **Table 6** below.

Table 6 – Extended Aeration Activated Sludge Basin Dimensions

Parameter	Value	Unit
Floor Length	189	Feet
Floor Width	93	Feet
Side Slope	1:2	Dimensionless
Freeboard	2	Feet

Parameter	Value	Unit
Side Water Depth	14	Feet
Grade to Floor Depth	16	Feet
Capacity	2.6	Million Gallons

40. The aeration basin will be equipped with a fine-bubble aeration system consisting of diffusers suspended from aeration headers. Twelve 6-inch floating headers will be installed across the width of the basin, with each header supporting nine diffuser arrays suspended approximately one foot above the basin floor. The aeration chain system will be designed to be self-propelled and free to move back and forth, providing enhanced mixing and oxygen transfer.

41. A new hydraulic control structure and influent inlet will be constructed along the eastern side of the aerated basin. At this structure, raw wastewater will mix with return activated sludge (RAS) before entering the basin. Effluent will exit the basin through three 10-inch pipes installed along the western slope and will discharge into a splitter box that divides the flow among the three secondary clarifiers.

42. Two rectangular secondary clarifiers will be constructed west of the extended aeration activated sludge basin. Effluent from the clarifier distribution box will enter each clarifier through an 18-inch influent pipe that discharges into a 12-foot-diameter center well designed to dissipate the energy of the incoming flow. Scum will be removed by a surface skimmer that conveys the scum to a scum box, from which it will be periodically pumped to the RAS/WAS pumping station. Dimensions for the proposed clarifiers are presented in **Table 7** below.

Table 7 – Secondary Clarifiers Dimensions

Parameter	Value	Unit
Diameter	50	Feet
Side Water Depth	15	Feet
Feed Pipe Diameter	18	Inches
Effluent Pipe Diameter	18	Inches
Sludge Withdrawal Pipe	10	Inches

Parameter	Value	Unit
Bottom Slope	1:12	Dimensionless

43. The clarifier is planned with an 18-inch reinforced concrete floor and walls, enhanced with a crystalline waterproofing admixture and an epoxy liner. The base of the proposed clarifiers are proposed to be constructed below seasonal high groundwater levels and will include one-way valves to allow groundwater to enter the clarifier if hydrostatic uplift becomes a concern. The City maintains that hydrostatic pressure within the clarifier will be consistently greater than any hydrostatic uplift forces encountered from shallow groundwater.

44. Effluent from the clarifiers will be stored during months when irrigation demand is low or when the Use Areas are being utilized by Tomatek. When the lined effluent storage ponds are full, effluent will be discharged into percolation ponds three, four, five, six, eleven, and into the stormwater pond during the summer. **Table 8** below provides the surface area and storage capacity of the proposed lined storage and percolation ponds.

Table 8 – Storage and Percolation Pond Dimensions

Pond	Surface Area (acres)	Capacity (acre-feet)
Effluent Storage Pond 1	4.6	26
Effluent Storage Pond 2	5.2	30
Percolation Pond 3	1.5	7
Percolation Pond 4	1.5	7
Percolation Pond 5	1.5	7
Percolation Pond 6	1.5	7
Percolation Pond 11	0.75	3.5
Stormwater Pond	9.7	48.5

45. Settled secondary sludge will be collected using a chain-and-flight collector. A RAS/WAS pumping station will receive effluent from each clarifier and will be equipped with four sludge pumps, two serving each clarifier. The RAS pumps will be capable of handling between 75 and 150 percent of the design flow, discharging into a 14-inch manifold. The RAS/WAS flow will be returned to the influent end of the aeration basin, while a wasting valve will divert waste activated sludge (WAS) to the sludge drying beds. The RAS/WAS pumps will also be configured to transfer scum from the scum box.

46. Currently, the WWTF routinely exceeds BOD and TSS as a monthly average. According to a 2021 Notice of Violation, the Facility exceeded the current BOD and TSS limits a total of 66 times from 2015 through 2021. Following the proposed WWTF upgrades, total nitrogen expected in the effluent will be reduced significantly to less than 10 mg/L. Similarly, effluent BOD and TSS are expected to be less than 20 mg/L after the upgrades are complete.

Table 9 – Proposed Effluent Quality

Parameters	Units	Proposed Effluent Quality
Total Nitrogen	mg/L	<10
BOD_5	mg/L	<20
TSS	mg/L	<20

Recycled Water Use Areas

47. Undisinfected secondary effluent from the secondary clarifiers will flow into an effluent lift station and then be pumped into either two lined storage ponds or four percolation ponds before being used for agricultural irrigation and percolation.

48. The proposed effluent disposal method has been developed in coordination with Tomatek to ensure it is feasible within the available site area. Under this plan, both domestic and industrial effluent will be applied to the designated Use Areas at agronomic rates. The approximately 151 acres of Use Areas will be cropped with sudan grass or winter wheat and will be irrigated via flood irrigation, but temporary sprinkler irrigation methods may also be used. During the summer months, when Tomatek's industrial discharge is at its peak, the City will convey domestic wastewater effluent to the percolation ponds. In the winter months, when Tomatek's discharge is significantly lower, the City's recycled water will be used to irrigate crops in the same Use Areas, enhancing crop yields and improving nitrogen uptake. The discharge from the two facilities will not be commingled.

49. Effluent stored in the ponds will be used to irrigate sudan grass, winter wheat, alfalfa, or percolate on select areas within the City's effluent reclamation system.

Land Discharge

50. The newly proposed configuration of the wastewater treatment system will reduce the number of unlined ponds from 13 to 5. The new extended aeration activated sludge system will feature two lined ponds, while the remaining five ponds will be unlined percolation ponds.

51. According to the RWD, the unlined percolation ponds will have a total surface area of approximately 6.75 acres, and the included water balance indicates a total annual percolation volume of approximately 955.6 acre-feet.

52. Assuming an effluent total nitrogen concentration of at least 10 mg/L, this will result in a pond loading of 3,850 lbs/ac/year as nitrogen. Similarly, for effluent concentrations of 20 mg/L for BOD and 785 mg/L for FDS, this will result in a pond loading of approximately 302,120 lbs/ac/year as FDS and 7,700 lbs/ac/year as BOD.

53. All loading calculations were based on domestic effluent at the Discharger's requested limit of 1.5 mgd, as presented in the water balance included in the RWD. Loading of domestic effluent to the Use Areas is expected to be approximately 122 lbs/ac/year for total nitrogen. The estimated nutrient uptake for nitrogen is 500 lbs/ac/year which results in a nitrogen deficit. Using the effluent FDS concentration of 785 mg/L, the estimated salt load as FDS is approximately 9,560 lbs/ac/year. The instantaneous BOD loading to the Use Areas is approximately 0.7 lbs/ac/day. The current cycle average BOD loading rates to the Use Areas ranges between 34 to 47.4 lbs/ac/day.

Table 10 – Proposed Use Area Loading Rates

Parameters	Units	Proposed Loading
Nitrogen	lbs/ac/yr	122
BOD_5	lbs/ac/day	0.7
Salt (as FDS)	lbs/ac/yr	9,560

54. A water balance was prepared using the combined monthly flow from the City and Tomatek. According to the water balance calculations, the City can reuse 975 ac-ft/yr of recycled water (approximately 70 percent of the total combined flow from the City and Tomatek) through irrigation. At full-buildout (1.5 MGD), the total volume of water reused through irrigation will be reduced to 907 ac-ft/yr (approximately 54 percent of the total combined flow from the City and Tomatek). The reduction is reportedly due to the anticipated increase in effluent flow needing to be sent to the percolation ponds at full-buildout.

Industrial Pretreatment Considerations

55. Certain industrial wastes, when discharged to wastewater treatment facilities without adequate controls, may cause one or more of the following problems:

    a. **Interference or Upset.** Discharges of high volumes or concentrations of certain waste constituents can inhibit or interfere with proper operations, thereby impairing the WWTF's ability to treat wastewater—and potentially preventing compliance with WDRs.

    b. **Sludge Management.** Industrial wastes, particularly metals and other toxic constituents, can limit available sludge management alternatives, thereby increasing the cost of sludge management and disposal. Contaminated biosolids may also be unsuitable as a soil amendment.

c. **Pass-Through.** Some industrial wastes may not receive adequate treatment and pass through the treatment system in concentrations that can could unreasonably degrade groundwater quality and/or prevent recycling of domestic wastewater.

d. **Other Hazards.** Additionally, the discharge of explosive, reactive, or corrosive wastes can cause damage to the wastewater collection system or the treatment works, as well as threaten the safety of workers and/or the general public.

56. The Discharger does not have an Industrial Pretreatment Program to regulate the discharge of industrial wastes into the collection system or treatment works, so as to prevent damage to the sewer system or treatment works, inhibit or disrupt the treatment process, or cause violation of the Effluent Limitations or Groundwater Limitations in this Order.

57. Currently, there are no significant industrial wastes proposed for discharge to the Facility. Consequently, an Industrial Pretreatment Program will not be required at this time. However, this Order requires the Discharger to report any proposed new industrial discharges and, if directed by the Executive Officer, to develop an Industrial Pretreatment Program regulating such discharges. Additionally, this Order also may be subsequently revised to require compliance with an approved program, if necessary.

Water Recycling Considerations

58. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organism as indicator organisms.

59. The State Water Board's Division of Drinking Water (DDW), which is charged with establishing drinking water quality standards for the protection of public health, has promulgated a criteria for the use of recycled water throughout California, codified as California Code of Regulations, title 22 (Title 22), section 60301 et seq.

60. In accordance with Title 22, on 11 July 2024, the Discharger submitted to DDW an Engineering Report for the recycling of "undisinfected secondary recycled water." (See Title 22, § 60301.230 [defining term].) A copy of the Engineering Report was also submitted to the Central Valley Water Board.

61. This Order does not include reclamation requirements pursuant to Title 22. The reclamation of treated domestic wastewater from the Facility will be covered separately under State Water Board General Order WQ 2016-0068-DDW, *Water Reclamation Requirements for Recycled Water Use* (Reclamation General Order).

62. On 11 July 2024, DDW approved the report, providing the following recommendations to the Central Valley Water Board:

> "The discharges authorized herein are consistent with the State Water Board's *Policy for Water Quality Control for Recycled Water* (Recycled Water Policy), Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057; and Central Valley Water Board Resolution R5-2009-0028 (*Resolution in Support of Regionalization, Reclamation, Recycling and Conservation for WWTPs*)."

Site-Specific Conditions

Topography, Climate and Land Use

63. The topography at the WWTF and Use Areas are relatively flat. A Federal Emergency Management Agency (FEMA) map identified the eastern part of the WWTF and the Use Areas to be in Zone AH, which indicates that this area has a 1% annual chance of shallow flooding. The western part of the Facility lies in Zone X, which indicates the area has a 0.2% annual chance of flooding.

64. The City currently has levees surrounding the Use Areas to mitigate potential flood risks. The Facility is also several feet above grade in comparison to the surrounding streets and properties.

65. Surface waters in the area consist of the San Joaquin River to the North, the Firebaugh Wasteway to the east, the Helm Canal to the south, and Lake Joallen to the west.

66. The Natural Resources Conservation Service soils report for the Use Areas states soils are comprised primarily of El Nido sandy loam, Bisgani-Elnido association, Wedoka clay, and Tachi clay. These soils are alluvium derived from either igneous or sedimentary rock, and are poorly drained with depths to a restrictive feature being greater than 80 inches.

67. The annual average precipitation for the area is approximately 7.9 inches, according to data obtained from the Western Regional Climate Center. The 24-hour, 100-year rain event is approximately 2.69 inches, according to data obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation Frequency Data Server. Based on the Reference Evapotranspiration Map published by the California Irrigation Management Information System (CIMIS 2018), the reference evapotranspiration rate is approximately 57.9 inches per year.

68. Regional land use data compiled by the California Department of Water Resources (DWR) indicate that land near the WWTF and Use Areas is primarily

used for agricultural purposes. The City of Firebaugh lies to the northwest of the WWTF and Use Areas.

Local Groundwater Conditions

Groundwater Occurrence

69. WDRs Order 98-230 required installation and monitoring of a groundwater monitoring network at the WWTF to monitor impacts from the discharge to groundwater underlying the Use Areas. As such, the monitoring wells were installed near the perimeter of the Use Areas rather than directly downgradient of the wastewater treatment plant disposal ponds.

70. Currently, the monitoring well network consists of seven shallow monitoring wells. Monitoring wells MW-1 through MW-4 were constructed in 2000, MW-5 and MW-6 were constructed in 2009, and MW-7 was constructed in 2022. Based on as-built diagrams for most of the monitoring wells, the wells are generally at shallow depths, with perforated intervals around 10 to 30 feet below ground surface (bgs). Well construction details are summarized in Table 11, and a map depicting locations of the monitoring wells is included as **Attachment C**.

Table 11 – Current Groundwater Monitoring Well Network

Well	Date Drilled	Drilled Depth (feet bgs)	Cased Depth (feet bgs)	Perforated Interval (feet bgs)	Depth of Annular Seal (feet bgs)
MW-1	7/25/00	30	30	10-30	14
MW-2	7/25/00	30	30	10-30	14
MW-3	7/25/00	30	30	10-30	14
MW-4	11/6/00	30	30	10-30	Unknown
MW-5	9/30/09	29	30	10-30	7
MW-6	9/30/09	27	29	10-30	5
MW-7	6/24/22	30	31	10-30	8

71. The 10-year average depth to groundwater is approximately 14.4 ft bgs and ranges from 10.8 ft bgs in MW-4 to 16.4 ft bgs in MW-1. The groundwater elevations of all monitoring wells along the boundary of the WWTF appear to be significantly influenced by the San Joaquin River.

72. Based on groundwater depth and elevation data, the recent local groundwater flow direction observed has been towards the northwest, and the historical flow direction has ranged in varying degrees to the north, west, and south, but not the east. The local gradient has generally been to the northwest beneath the site but can be locally affected by seasonal hydraulic conditions.

73. The typical 10-year average groundwater gradient is roughly 2.7 feet per mile to the northwest. According to the quarterly reports, the estimated groundwater velocity for the Use Areas is 2.2 feet per year, which is based on a roughly estimated hydraulic conductivity of 11.9 feet per day for poorly graded sand. Adjusting for specific yield, estimated pore velocity would be roughly four times those values, or approximately 8.8 feet per year in the poorly graded sand layers, which corresponds to a 333-year average travel time for groundwater to completely cross the site laterally from MW-3 to MW-4.

74. Staff had concerns with shallow groundwater and the proposed depths of the extended aeration activated sludge basin and secondary clarifiers. In response, the Discharger provided additional information on the proposed project, including a geotechnical investigation conducted by Krazan & Associates, Inc. (Krazan) dated 12 March 2020. As part of its investigation, Krazan drilled several borings and collected soil samples for analysis, including two borings within the old polishing pond to be used for construction of the new aeration basin and clarifiers for the WWTF upgrades. The borings were drilled to about 15 feet below the base of the old polishing pond. Soils consisting of silty sands and silty clays were identified and groundwater was encountered at a depth of about 8.5 feet below the bottom of the pond. The geotechnical investigation concluded that seasonal-high groundwater might be an issue and Krazan recommended installing a piezometer in the area prior to construction to determine if it would be a concern. The geotechnical investigation also recommended dewatering and/or waterproofing should structures or excavations extend below the water table.

75. Updated elevation data provided by the Discharger's consultant indicates that the proposed secondary clarifier will be below groundwater. The design plans indicate that the bottom of the proposed clarifiers will be constructed at an approximate elevation of 130.5 feet above mean sea level (amsl), which is about five feet below the observed groundwater table at 135.05 feet asml. In addition, there is less than five feet of separation between groundwater and the bottom of the extended aeration activated sludge basin. As noted in previous findings, the extended aeration activated sludge basin and clarifiers will both be concrete lined with a waterproofing admixture, and one-way valves will be installed in the clarifiers to address potential hydrostatic uplift from shallow groundwater.

Groundwater Quality

76. The City owns and operates two drinking water treatment plants (WTPs) that remove arsenic, iron, and manganese from its six active drinking water wells using an oxidation filtration process. Naturally occurring arsenic is present in three of the City's wells and naturally occurring iron and manganese are present in all the wells. The City's two WTPs provide treatment to reduce arsenic, iron,

and manganese concentrations in the source water before it is conveyed to the distribution system for consumer use.

77. The City's drinking water supply wells are located northeast of the WWTF, across the San Joaquin River, and are likely not influenced by the discharge. The nearest City supply well to the WWTF is Well #17, which is 3,000 feet northwest of the LAA. The raw water produced by the City's wells is mostly in compliance with primary drinking water standards with the exception of naturally elevated metals (iron, manganese, and arsenic). Table 12 below summarizes average metals concentration data in raw source water samples from City supply wells collected between August 2022 and May 2025 and available from the Safe Drinking Water Information System database.

Table 12 – Metals Concentration in Raw Source Water

Parameters	Units	Average Result
Iron	ug/L	204
Manganese	ug/L	435
Arsenic	ug/L	14

78. Monitoring and Reporting Program (MRP) 98-230 required annual water supply monitoring for standard minerals, electrical conductivity, and total dissolved solids. Data available from the previous five years of annual reports show that standard minerals are only sampled once every three years. Treated source water quality for 2024 is provided in **Table 13** below; however, the self-monitoring report does not specify whether this includes all source water wells.

Table 13 – Treated Source Water Quality

Parameters	Units	2024
EC	µmhos/cm	1,100
TDS	mg/L	560
Nitrate (NO_3) as N	mg/L	<0.23
Total Nitrogen	mg/L	<1.0
Sodium	mg/L	140
Chloride	mg/L	190
Boron	mg/L	0.33
Iron	ug/L	37
Manganese	ug/L	<10
Arsenic	ug/L	6.5

79. Average upgradient groundwater quality reported in the Discharger's self-monitoring reports for MW-2 and MW-3 from 2020 through 2024 are summarized in **Table 14** below.

Table 14 – Upgradient Groundwater Quality

Constituent	Units	MW-2	MW-3
EC	µmhos/cm	990	603
TDS	mg/L	629	385
Nitrate (as Nitrogen)	mg/L	0.5	0.37
Total Nitrogen	mg/L	0.6	0.5
Hardness as $CaCO_3$	mg/L	209	134
Calcium	mg/L	49	32
Magnesium	mg/L	21	13
Sodium	mg/L	125	69
Potassium	mg/L	4.9	2.5
Chloride	mg/L	123	82
Sulfate	mg/L	161	76
Arsenic	µg/L	3.85	7.28
Boron	mg/L	0.63	0.31
Iron	mg/L	2.94	0.96
Manganese	mg/L	0.81	0.11

80. Average downgradient groundwater quality reported in the Discharger's self-monitoring reports for MW-1, and MW-4 through MW-7 from 2020 through 2024 are summarized in **Table 15** below.

Table 15 – Downgradient Groundwater Quality

Constituent	Units	MW-1	MW-4	MW-5	MW-6	MW-7
EC	µmhos/cm	2,027	2,255	1,920	1,674	2,060
TDS	mg/L	1,555	1,343	1,197	1,019	1,253
Nitrate (as Nitrogen)	mg/L	3.76	1.21	1.55	1.19	0.86
Total Nitrogen	mg/L	3.1	9.7	0.9	14	1.9
Hardness as $CaCO_3$	mg/L	804	397	307	221	326
Calcium	mg/L	226	101	74	66	74

Constituent	Units	MW-1	MW-4	MW-5	MW-6	MW-7
Magnesium	mg/L	58	35	29	14	34
Sodium	mg/L	173	329	299	221	318
Potassium	mg/L	2.3	48	11.1	114	10
Chloride	mg/L	180	337	330	225	364
Sulfate	mg/L	637	49	168	23	173
Arsenic	µg/L	4.66	29	5.81	105	16.9
Boron	mg/L	0.73	0.58	0.61	0.34	0.73
Iron	mg/L	0.06	4.02	2.38	3.41	1.14
Manganese	mg/L	0.15	1.72	0.32	0.42	0.96

81. According to a 2024 Annual Monitoring Report submitted by the Discharger and Tomatek, Inc., MW-1 is the only monitoring well that has shown a consistent increase in all constituents detected, including EC, TDS, chloride, sulfate, manganese, and arsenic.

82. MW-1 is directly downgradient of the Use Areas and three percolation ponds that are proposed to be abandoned during the WWTF upgrades. Similarly, only MW-1 has exceeded the primary MCL for nitrate (as nitrogen) of 10 mg/L, but, as shown in Table 15, the five-year average concentration at the well is about 3.1 mg/L.

83. Arsenic concentrations in the upgradient and downgradient wells are generally below the primary MCL of 10 ug/L; however, concentrations of arsenic in three downgradient wells (MW-4, MW-6, and MW-7) are above the primary MCL. Arsenic concentrations in wells MW-4 and MW-6 are approximately three to ten times greater, respectively.

84. Iron concentrations in groundwater are typically above the secondary MCL of 300 ug/L; however, MW-1, MW-5, and MW-6 typically have concentrations below the secondary MCL.

85. While downgradient concentrations of iron are typically higher than upgradient monitoring wells, the upgradient average iron concentration in MW-2 is almost 3 mg/L, indicating a potential natural occurrence of iron. According to the quarterly monitoring reports, other sources of iron may include the nearby Lake Joallan and the San Joaquin River which had iron concentrations of 3.9 mg/L, and 1.59 mg/L, respectively.

86. Similarly, both upgradient and downgradient monitoring wells have elevated levels of manganese, with all monitoring wells having concentrations above the secondary MCL of 50 ug/L.

Statutory Authority

87. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, § 13263, subd. (g).)

88. This Order, in part, and its associated Monitoring and Reporting Program (MRP) are adopted pursuant to Water Code section 13267, subdivision (b)(1), which provides as follows:

[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The reports required under this Order, as well as under the separately issued MRP, are necessary to verify and ensure compliance with WDRs. The burden associated with such reports is reasonable relative to the need for their submission.

89. This Order is adopted pursuant to Water Code section 13263, subdivision (a), which provides in pertinent part as follows:

The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Water Code] Section 13241.

Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.

Basin Plan Implementation

Beneficial Uses of Water

90. This Order implements the Central Valley Water Board's Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.)

91. The WWTF is within the Los Banos Hydrologic Area (No. 541.20), as depicted on interagency hydrologic maps prepared by the State Water Board. Local drainage is to the San Joaquin River. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility are municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

Water Quality Objectives

92. The Basin Plan establishes a numeric WQO for total coliform organisms in groundwater and narrative WQOs for chemical constituents, tastes and odors, and toxicity in groundwater.

93. The numeric WQO for bacteria is expressed as the most probable number (MPN) of coliform organisms per 100 mL of water. For MUN-designated groundwater, the objective is an MPN of 2.2 organisms over any seven-day period.

94. The narrative WQO for chemical constituents in groundwater generally provides that groundwater shall not contain constituents in concentrations adversely affecting beneficial uses. For MUN-designated waters, the Basin Plan further provides that water must, at a minimum, meet the primary and secondary maximum contaminant levels (MCLs) specified in California Code of Regulations, title 22 (Title 22). The Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

95. The narrative WQO for tastes and odors in groundwater provides that groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

96. The narrative WQO for toxicity provides that groundwater shall be maintained free of toxic substances in concentrations producing detrimental physiological responses in human, animal, plant or aquatic life associated with designated beneficial uses.

97. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numeric limitations to implement the narrative objective. In establishing a specific numeric interpretation of a narrative WQO, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as Water Quality of Agriculture by Ayers and Westcot (1985) and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an electrical conductivity (EC) of less than 700 µmhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000 µmhos/cm, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop. The list of crops in the findings is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge.

Salt and Nitrate Control Programs

98. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 to make targeted revisions requested by the State Water Board with Resolution R5-2020-0057. The revisions to the Basin Plan amendments became effective on 10 November 2021

(https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).

99. Under the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements may instead be subject to performance-based requirements as determined appropriate by the Central Valley Water Board and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger elected to participate in the P&O Study (Pathway 2, the Alternative Compliance Pathway Approach) and was issued an identification number for the Salt Control Program (**CV-SALTS ID 2664**). The Discharger is currently in good standing with the program. To maintain existing salt discharges and minimize salinity impacts, this Order sets an annual average Salinity Action Level of 2,000 µmhos/cm for EC on the discharge to the Use Areas. The limit is based on the maximum observed annual average effluent EC level of 1,744 µmhos/cm and includes about a ten percent contingency to account for drought conditions and water conservation efforts. If the discharge results in an

exceedance of the Salinity Action Level, this Order includes Provision F.1 requires the Discharger to evaluate salinity sources and potential source control measures to decrease salinity in the discharge.

100. The Nitrate Control Program is a prioritized program. The Facility is within Groundwater Basin 5-022.07 (San Joaquin Valley – Delta-Mendota), which is a Priority 2 Basin. Notices to Comply were issued to dischargers in Priority 2 Basins 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). Under the collective approach, dischargers jointly form "Management Zones" that fulfill the requirements of the Nitrate Control Program. The Discharger is participating in the Pathway B Management Zone Permitting Approach for Groundwater Basin 5-022.07.

101. Under the Nitrate Control Program, dischargers that cause or contribute to nitrate pollution in groundwater must qualify for a limited term "exception" from meeting nitrate limits in groundwater. 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.

102. 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 is due to the Central Valley Water Board on 16 February 2026.

103. 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.

104. As these 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. As such, this Order may be amended or modified to incorporate any 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).

Antidegradation Policy

105. State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California* (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of "high-quality waters" unless it is shown that such degradation will be consistent with the maximum benefit to the people of California; will not unreasonably affect present and anticipated future beneficial uses; and will not result in water quality less than as prescribed in applicable policies. Resolution 68-16 further requires that any discharge to existing high quality waters be required to meet WDRs that will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that pollution and/or nuisance will not occur and that the highest quality consistent with the maximum benefit to the people of the state will be maintained.

106. The Antidegradation Policy applies when the Central Valley Water Board authorizes an activity that will result in discharges of waste to high-quality waters that will degrade the quality of those waters. "High-quality waters" are those waters where water quality is more than sufficient to support beneficial uses designated in the Basin Plan. Whether a water is a high-quality water is established on a constituent-by-constituent basis, which means that an aquifer can be considered a high-quality water with respect to one constituent, but not for others (State Water Board Order No. WQ 91-10). If the activity will not result in the degradation of high-quality waters, the Antidegradation Policy does not apply, and the discharger need only demonstrate that it will use "best efforts" to control the discharge of waste.

107. Groundwater quality monitoring at the Facility dates to 1978, and compliance with the Antidegradation Policy will determined based on existing background water quality data (Antidegradation Baseline) observed from the WWTF's groundwater monitoring well network, and City source water supply.

108. For the purposes of this Order, constituents/parameters in effluent with the potential to degrade groundwater and/or affect beneficial uses include nitrate/nitrogen, salts (sodium, chloride, EC, TDS, etc.), pathogens (i.e., total coliform), and organics/metals. The table below provides a comparison of average concentrations of these constituents of concern in effluent, groundwater monitoring wells, and source water supply wells. Water quality concerns associated with this Facility include nitrate/total nitrogen, salts, and metals as

summarized below. No total coliform data is shown in the table below, as there is no current total coliform data (effluent or groundwater). Groundwater monitoring well data are presented as ranges of observed average concentrations of the wells based on their relative position to the WWTF (upgradient and downgradient).

Table 16 – Constituents with Potential for Degradation

Constituent	Units	Source Water (see 1 below)	Effluent	Upgradient (Background)	Down-gradient	WQOs
BOD_5	mg/L	---	31.9	---	---	---
TSS	mg/L	---	46.2	---	---	---
TDS	mg/L	560	890	385 – 689	1,019 – 1,555	500 (sMCL)
EC	µmhos/cm	1,100	1,744	603 – 990	1,674 – 2,255	900 (sMCL)
Chloride	mg/L	190	286.7	82 – 123	180 – 364	250 (sMCL)
Sodium	mg/L	140	206.7	69 – 125	173 – 329	69 (ag)
Nitrate as N	mg/L	<0.23	ND	0.37 – 0.5	0.86 – 3.76	10 (MCL)
Iron	mg/L	0.204	0.15	0.96 – 2.94	0.06 – 4.02	0.3 (sMCL)
Manganese	mg/L	0.435	---	0.11 – 0.81	0.15 – 1.72	0.05 (sMCL)
Arsenic	ug/L	14	---	3.85-7.28	4.7 – 105	0.01 (sMCL)

1. Raw source water values for iron, manganese, and arsenic collected from City municipal wells between August 2022 and May 2025 available from the Safe Drinking Water Information System (SDWIS) database.

a. **Salinity (EC and TDS).** Current groundwater data shows source water and upgradient salinity concentrations are around or below the lower secondary MCLs but generally above the conservative 700 umhos/cm numeric salinity value that is protective of the AGR beneficial use during Phase 1 of the Salinity Control Program. Based on available data, the Facility's expected annual average EC is 1,744 µmhos/cm. These concentrations are above the recommended secondary MCL of 900 µmhos/cm. The Facility's groundwater monitoring network indicates that the Facility's discharge has degraded underlying groundwater with respect to salinity. With a source water EC of about 1,100 µmhos/cm, the net increase (source water vs effluent) in EC in the WWTF's discharge is around 644 µmhos/cm.

Upgrades to the WWTF include the addition of long-term effluent storage in a lined pond prior to reclamation, which is expected to reduce the salt load relative to current conditions. In addition, to help ensure that the

discharge continues to implement salinity reduction measures, this Order includes a Salinity Action Level and requires the Discharger to prepare and implement a Salinity Evaluation and Minimization Plan. Furthermore, this Order requires the Discharger to continue to comply with the Salt Control Program requirements (i.e., continue to participate in the P&O Study).

b. **Nitrogen.** Groundwater data from source water and the on-site groundwater monitoring network indicate that groundwater is of good quality with respect to nitrate. Based on limited available nitrate data for the effluent, it does not appear the discharge has significantly impacted underlying groundwater for nitrate (comparing upgradient nitrate concentrations as shown in Table 16 to downgradient well concentrations). With the upgraded wastewater treatment system, which will provide nitrification and denitrification, effluent total nitrogen concentrations will be less than 10 mg/L, and long-term storage of effluent in lined ponds will reduce disposal of waste by percolation and its associated nitrogen impacts. Also, the nitrogen loading and application at agronomic rates indicates that nitrogen loading to the Use Areas will be in a deficit. In addition, this Order requires the Discharger to comply with the Nitrate Control Program, and the Discharger indicated their intent to join the Delta-Mendota Valley Water Collaborative. Accordingly, the Facility and reclamation upgrades, together with participation in the Delta-Mendota Management Zone, will help mitigate the discharge's impact on underlying groundwater, particularly with respect to nitrate.

c. **Pathogens.** MRP 98-230 did not require the Discharger to monitor groundwater for total coliform. The Facility does not provide disinfection as part of the treatment process; however, effluent percolates through about 15 feet of soil prior to reaching groundwater, which may be sufficient to filter out pathogens (e.g., total coliform) and prevent groundwater degradation with regards to total coliform. Therefore, the Facility's discharge should not have a significant impact on underlying groundwater with respect to total coliform. Nevertheless, the MRP requires the Discharger to monitor all groundwater monitoring wells for total coliform to evaluate any impacts to groundwater related to the Facility's discharge.

d. **Organics/Metals.** Regarding BOD, excessive loading can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface this can result in nuisance odors and fly breeding. Below the ground surface, when insufficient oxygen is present, anaerobic decay of organic matter can create reducing conditions that convert metals naturally present in the soil from relatively insoluble (oxidized) forms into more soluble reduced forms.

Available raw source water data and groundwater quality data from the Facility's onsite upgradient groundwater monitoring well network shows metals (mainly iron, manganese, and arsenic) concentrations near or above the respective MCLs. Upgradient monitoring well concentrations for iron and manganese exceed the WQOs for iron and manganese, but not arsenic. While upgradient monitoring wells do not indicate exceedances of the arsenic WQO, it's expected that recharge from the north-adjacent Firebaugh Wasteway, which is hydraulically connected to the San Joaquin River, may influence upgradient monitoring well concentrations since raw source water quality data indicates that the City's municipal supply wells exceed WQOs for arsenic and manganese prior to treatment at the WTPs. Therefore, local groundwater is not considered high-quality in regard to metals.

Downgradient groundwater quality data appears to indicate that historic wastewater discharges have likely impacted some downgradient monitoring wells, specifically with respect to arsenic. However, proposed upgrades to the WWTF are anticipated to significantly improve the WWTF's ability to remove organic matter, which should result in improved groundwater conditions at the site for metals. Additionally, the proposed conversion of some of the existing percolation ponds to lined storage ponds will reduce potential for anoxic conditions to impact underlying groundwater. This Order requires groundwater monitoring for metals to continue to monitor the Facility's impact on underlying groundwater.

109. The Discharger implements, or will implement, as required by this Order the following measures, which the Central Valley Water Board has determined constitute BPTC. These measures will minimize the extent of water quality degradation resulting from the Facility's continued operation:

a. Domestic wastewater treatment utilizing biological nutrient removal, and clarification.

b. Treatment and long-term effluent storage in lined containment structures.

c. Wastewater application to Use Areas must be at agronomic rates.

d. Groundwater monitoring for potential impact of the Facility's discharge on underlying groundwater.

e. Compliance with the Salt and Nitrate Control Programs, including establishing a Salinity Action Level of 2,000 µmhos/cm.

f. BOD cycle average loading rates shall not exceed 100 lbs/ac/day.

g. Sludge/biosolids in lined sludge drying beds and hauled off-site.

h. Use of certified operators to ensure proper operation and maintenance of the WWTF.

i. Preparation and implementation of a Wastewater and Nutrient Management Plan and a Salinity Evaluation and Minimization Plan.

110. Generally, limited degradation of groundwater by some of the typical waste constituents of concern (e.g., EC and nitrate) released with the discharge from a municipal wastewater utility after effective source control, and treatment is consistent with maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts on water quality will be substantially less. The degradation will not unreasonably affect present and anticipated beneficial uses of groundwater, or result in water quality less than water quality objectives.

111. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

112. In accordance with CEQA, Public Resources Code section 21000 et seq., City of Firebaugh, as lead agency, approved a Mitigated Negative Declaration (MND) for the City of Firebaugh WWTF Project (SCH: 2017021058) on 17 February 2017. The MND considered construction of an extended aeration activated sludge system that would allow the WWTP to produce effluent with a quality that meets existing limits.

113. The Central Valley Water Board, as a "responsible agency" under CEQA, was consulted in the lead agency's development of the MND. The discharges and other activities authorized under this Order also fall within the scope of the proposed project (as contemplated in the MND).

114. 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.

115. 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.

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

117. To the extent that the construction of any new basins, ponds, surface impoundments, and/or use of existing irrigated lands as new Use Areas 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.

Other Regulatory Considerations

Water Code Section 13149.2

118. These WDRs regulate a Facility that may impact a disadvantaged community and/or tribal community and includes an alternative compliance path that allows the Discharger time to come into compliance with certain WQOs (i.e., salinity). The Discharger has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with salinity limits through implementation of specific requirements (i.e. support facilitation and completion of the Salinity P&O study). The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities through its notice and comment procedures. Additionally, the Central Valley Water Board sent a 17 September 2025 letter to potentially impacted disadvantaged and tribal communities for planned program actions, including preparation of this Order, to solicit consultation. Pursuant to Water Code section 13149.2, and as discussed in the following finding, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority and raised by interested persons with regard to those impacts.

119. The Central Valley Water Board anticipates that the issuance of these WDRs will result in water quality impacts within the scope of the Board's authority. Specifically, these WDRs authorize the discharge of wastewater with salinity concentrations that may cause limited degradation or exceedances of applicable WQOs in the near term. The BPTC measures required by this Order, as described above, are intended to minimize and, in the longer term, mitigate the impacts of the Facility's discharge on nearby disadvantaged communities in Fresno County. Although this Order may result in limited increases to salinity concentrations in groundwater in the near-term, the Salt Control Program is intended to achieve long-term balance and restoration, where possible, of salt-impacted groundwater basins across the region.

Human Right to Water

120. Pursuant to Water Code section 106.3, subdivision (a), it is “the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see §106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet MCLs for drinking water (excluding salinity), which are designed to protect human health and ensure that water is safe for domestic use. For salinity and nitrate, this Order requires compliance with the Salt and Nitrate Control Programs. Although the Basin Plans’ Exceptions Policy for Salinity, Nitrate, and/or Boron allows participants in these Programs to obtain limited-term exceptions from the MCLs, the Salt Control Program is consistent with the Human Right to Water Policy because of its over-arching management goals and priorities include long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable.

Threat-Complexity Rating

121. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of **2**-**B**.

    a. Threat Category “2” reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations, cause secondary drinking water standard violations, and cause nuisances.

    b. Complexity Category “B” reflects any discharger not included in Category A, with either (1) physical, chemical or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

Title 27 Exemption

122. This Order, which prescribes WDRs for discharges of treated domestic wastewater from a municipal treatment plant to land, is exempt from the prescriptive requirements of California Code of Regulations, title 27 (Title 27), section 20005 et seq. (See Cal. Code Regs., tit. 27, § 20090, subd. (b).)

123. Discharges of which are regulated by WDRs, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

124. Statistical data analysis methods outlined in the USEPA’s 2009 Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance

(Unified Guidance) are appropriate for determining compliance with Groundwater Limitations of this Order. Other methods may be appropriate as well.

Stormwater

125. This Order does not cover stormwater and other discharges that are subject to the Clean Water Act's National Pollution Discharge Elimination System (NPDES). With respect to stormwater, the Facility is currently covered under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities, State Water Board Order 2014-0057 DWQ, NPDES General Permit CAS000001 (Industrial General Permit).

Sanitary Sewer Overflows

126. The Facility is subject to the statewide General Waste Discharge Requirements for Sanitary Sewer Systems, State Water Board Order 2022-0103-DWQ (SSO General Order), which requires that all public agencies owning or operating sanitary sewer systems with total system lengths in excess of one mile must enroll. The Discharger's collection system exceeds one mile in length and the Discharger is enrolled under the SSO General Order. Spills and other aspects of the collections system operation and maintenance are regulated under the SSO General Order and not by this Order.

Groundwater Well Standards

127. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (DWR Well Standards), as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 74-81 (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

128. Statistical data analysis methods outlined in the USEPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) are appropriate for determining compliance with the Groundwater Limitations of this Order. Depending on the circumstances, other methods may also be appropriate.

Scope of Order

129. This Order is strictly limited in scope to those waste discharges, activities and processes described and expressly authorized herein.

130. Pursuant to Water Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those

described herein), or making material changes to the character, volume and timing of waste discharges authorized herein, without filing a new Report of Waste Discharge (ROWD) per Water Code section 13260.

131. Failure to file a new ROWD before initiating material changes to the character, volume or timing of discharges authorized herein, shall constitute an independent violation of these WDRs.

132. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Discharger," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

133. All of the above information, as well as the information contained in the attached Information Sheet (incorporated herein), was considered by the Central Valley Water Board in prescribing the WDRs set forth below.

134. The Discharger, interested agencies and other interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (See Wat. Code, § 13167.5.)

135. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

136. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

It is Hereby Ordered that pursuant to Water Code sections 13263 and 13267, WDRs Order No. 98-230 is rescinded (except for enforcement purposes) and that the Discharger and their agents, employees, and successors shall comply with the following:

A. Standard Provisions

Except as expressly provided herein, the Discharger shall comply with the Standard Provisions and Reporting Requirements dated 1 March 1991 (SPRRs), which are incorporated herein.

B. Discharge Prohibitions

1. Waste classified as "hazardous" (per Cal. Code Regs., tit. 22, §66261.1 et seq.), shall not be discharged at the Facility under any circumstance.

2. Waste constituents shall be not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in:

   a. Violations of the Groundwater Limitations of this Order; or

   b. Conditions of “nuisance” or “pollution,” as defined per Water Code section 13050.

3. Sewage and other waste shall not be discharged to surface waters or surface water drainage courses.

4. Bypass or overflow of the Facility’s wastewater treatment and containment structures in prohibited.

5. Waste shall not be discharged from the Facility in a manner other than as described in this Order.

6. Toxic substances shall not be discharged into the wastewater treatment system such that biological treatment mechanisms are substantially disrupted.

C. Conditional Discharge Prohibitions

1. During Phase I of the Salt Control Program, the Discharger is prohibited from discharging salts at concentrations exceeding the salinity numeric value of 700 µmhos/cm (calculated as a monthly average) and 900 µmhos/cm (as an annual average) unless the Discharger is implementing the Phase I requirements of the Salt Control Program Alternative Permitting approach (i.e., full participation in the P&O Study).

2. The Discharger is prohibited from discharging nitrate and other forms of nitrogen speciation (e.g., total inorganic nitrogen and total Kjeldahl nitrogen) unless the Discharger is implementing the requirements of the Nitrate Control Program.

D. Flow Limitation

1. Effluent discharged from the Facility at EFF-001 (as defined in the MRP), shall not exceed a monthly average flow of 1.5 mgd.

E. Effluent Limitations

1. Until Facility upgrades are complete (i.e., prior to submittal of the Final Completion Report required by Provision J.4) effluent discharged at

EFF-001 (as defined in the MRP) shall not exceed the limits specified below in **Table 17**

Table 17 – Effluent Limits Prior to Facility Upgrade

Constituent	Parameter	Units	Limit
BOD_5	Monthly Average	mg/L	40
BOD_5	Max Daily	mg/L	80
TSS	Monthly Average	mg/L	40
TSS	Max Daily	mg/L	80

2. Upon completion of the Facility upgrades (i.e., upon submittal of the Final Completion Report per Provision J.4) effluent discharged at EFF-001 (as defined in the MRP) shall not exceed the limits specified below:

   a. The effluent limitations specified in **Table 18**.

Table 18 – Effluent Limits Following Facility Upgrade

Constituent	Parameter	Units	Limit
BOD_5	Monthly Average	mg/L	20
BOD_5	Max Daily	mg/L	40
TSS	Monthly Average	mg/L	20
TSS	Max Daily	mg/L	40
Total Nitrogen (as N)	Monthly Average	mg/L	10

   b. The arithmetic mean of BOD_5 and TSS in effluent samples (EFF-001) collected over a monthly period shall not exceed 20 percent of the arithmetic mean of the values for influent samples (INF-001) collected at approximately the same time during the same period (i.e., minimum of 80 percent removal).

F. Salinity Action Level

1. To comply with the Salt Control Program, the Discharger has selected the Alternative Salinity Permitting Approach (i.e., Path 2, participation in the P&O Study). Therefore, as discussed in the Findings, these WDRs establish an annual average Salinity Action Level for EC of **2,000 µmhos/cm**. As required per the MRP, the Discharger shall evaluate the annual average effluent EC

concentration in the discharge [monitored at EFF-001] with this Salinity Action Level.

c. An evaluation of the Facility's salinity effluent levels. This evaluation shall discuss any changes to the source water for the area served by the WWTF, any new industrial dischargers discharging to the WWTF, any increased conservation efforts implemented within the WWTF service area (with flow data demonstrating decreased flows to the WWTF), and any other changes to WWTF's collection or treatment system that could have contributed to the increased salinity concentrations.

b. If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Salinity Action Level Report shall include a detailed work plan describing what actions the Discharger will conduct (with completion dates) to investigate the source(s) of salinity and report its findings to the Central Valley Water Board. The findings from the investigation shall be submitted to the Central Valley Water Board no later than October 1st of the year following the exceedance of the Salinity Action Level.

c. The Salinity Action Level Report shall evaluate the potential impact the increased salinity concentrations could have on underlying groundwater and downgradient users. If additional time is needed for this evaluation, the Salinity Action Level Report shall propose a submittal date (no later than October 1st of the year following the exceedance of the Salinity Action Level).

G. Discharge Specifications

1. Waste discharges shall remain within authorized Use Area and authorized waste treatment and/or containment structures at all times.

2. All systems and equipment shall be operated to optimize discharge quality.

3. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

4. Public contact with wastewater at the Facility shall be prevented through such means as fences, signs, or acceptable alternatives.

5. Objectionable odors shall not be perceivable beyond the limits of the Facility property at an intensity that creates or threatens to create

nuisance conditions. As a means of ensuring compliance with Discharge Specification G.5, the Discharger shall comply with the following:

a. The dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the DO concentrations in the ponds is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If the DO in any single pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Central Valley Water Board in accordance with **Section B.1** of the SPRRs. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.

6. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

7. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

8. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.6 and E.7.

9. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

10. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

11. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

12. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in 2026 and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds five percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 12 months after the date of the estimate

13. Once the facility upgrades are completed (i.e., submittal of the Final Completion Report required by Provision J.4 of this Order), all wastewater, with the exception of effluent sent to the percolation ponds, and solids shall be contained in or stored on an engineered lined surface with a hydraulic conductivity standard of 1.0×10^{-6} centimeters per second or less using one of the following:

    a. A compacted clay liner, with a minimum clay thickness of two feet.

    b. A Portland cement concrete liner, designed to minimize cracking and infiltration.

    c. A synthetic liner, consisting of a 40 thousandths of an inch (mil) synthetic geomembrane or a 60-mil high-density polyethylene liner installed over a prepared base or a secondary clay or concrete liner.

    d. An equivalent engineered alternative.

The Discharger shall regularly inspect the condition of the engineered liner(s) to ensure the integrity of the liner is maintained and leakage is minimized. Necessary repairs shall be completed within a reasonable timeframe consistent with the severity of the impairment and potential impact to water quality.

H. Groundwater Limitations

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

1. Groundwater exceeding a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.

2. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations , excluding salinity provided the Discharger complies with Salt Control Program requirements (see Conditional Prohibitions C.1).

3. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses (e.g., by creating off-tastes and/or odor, producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]).

I. Solids Disposal Specifications

For the purposes of this section, “**sludge**” means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. For the purposes of this section, “**solid waste**” includes grit and screenings generated during preliminary treatment at the Facility. For the purposes of this section, “**residual sludge**” means sludge that will not be subject to further treatment at the Facility. For the purposes of this section, “**biosolids**” refers to sludge that has been treated and tested and shown to be capable of being beneficially used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations.

1. Sludge and Solid Waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.

2. Onsite handling and storage of Residual Sludge, Solid Waste, and Biosolids shall be temporary (6 months or less); and controlled and

contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the Groundwater Limitations of this Order.

3. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

4. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board except in cases where a local (e.g., county) program has been authorized by a regional water board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order 2004-12-DWQ, “General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities”). For a biosolids use project to be covered by Order 2004-12-DWQ, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

5. Use and disposal of biosolids shall comply with the self-implementing federal regulations of 40 Code of Federal Regulations part 503, which are subject to enforcement by the U.S. EPA, not the Central Valley Water Board. If during the life of this Order, the State accepts primacy for implementation of part 503, the Central Valley Water Board may also initiate enforcement where appropriate.

6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

J. Provisions

1. The Discharger shall comply with the separately issued **Monitoring and Reporting Program Order (MRP) R5-2026-XXXX**, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

2. A copy of this Order (including Information Sheet, Attachments, and SPRRs) and the MRP, shall be kept at the Facility for reference by

operating personnel. Key operating personnel shall be familiar with their contents.

3. The Discharger shall comply with the applicable provisions of the Salt and Nitrate Control Programs adopted in Resolution R5-2018-0034 (and revised per Resolution R5-2020-0057) to address ongoing salt and nitrate accumulation in the Central Valley and developed as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative.

4. The Discharger shall provide a **Final Completion Report** within 90 days of the completion of upgrades at the facility. For purposes of this requirement, “completion” shall mean the date upon which all construction activities associated with the approved upgrades are substantially complete, all major equipment has been installed and is operational, and the upgraded treatment processes can function as designed. The Final Completion Report shall include the following:

    a. A summary of all upgraded components installed.

    b. Written certification signed and stamped by a California-licensed Professional Engineer attesting that the upgrades were constructed in accordance with the approved plans and specifications.

    c. Record drawings (as-built drawings) reflecting final constructed conditions.

    d. Calibration records for monitoring and control instrumentation installed as part of the upgrades.

    e. Photographs of the completed improvements.

5. By **16 July 2026**, the Discharger shall submit a **Wastewater and Nutrient Management Plan** that describes how the Discharger will manage the Use Areas and apply wastewater in accordance with these WDRs. At a minimum, the Wastewater and Nutrient Management Plan must include the following:

    a. Procedures for monitoring Facility operations and discharge.

    b. A discussion of how effluent from the domestic and industrial facilities will not be commingled, and the measures that will be implemented to ensure that effluent discharged to the Use Areas is applied at agronomic rates.

c. Practicable measures to ensure reasonable even application of wastewater, including how the Discharger will evenly apply wastewater across an entire field. The Plan shall also demonstrate how the Facility will not discharge wastewater to Use Areas when the soil is saturated (e.g., during and after significant precipitation).

d. An action plan to deal with objectionable odors and/or nuisance conditions.

e. Details on how wastewater and irrigation water will be blended (if applicable).

f. A detailed map of the Use Areas to be used each year to facilitate tracking annual wastewater application and nutrient release to the land.

g. Management practices that will ensure that wastewater, irrigation water, and fertilizers/compost are applied at agronomic rates to the Use Areas, including but not limited to adjusting wastewater application and spreading based on consideration of soil available nutrients.

h. Measures to mitigate past and future impacts to the buffering capacity of soils (e.g., soil lime treatment) at the Use Areas to ensure that optimal soil conditions and nutrient availability are maintained to allow for maximum plant uptake.

6. By **16 July 2026**, develop and implement a **Salinity Evaluation and Minimization Work Plan** for the proposed discharge. This work plan shall identify salinity control measures that could further reduce the salinity of the Facility's discharge, including chloride. The Plan shall provide a description of the tasks, cost, and time required to investigate and implement the various elements in the Salinity Control and Minimization Plan. At a minimum, the plan shall include:

a. An estimate of all the sources that contribute, or potentially contribute, to the loadings of salinity, in the Facility's proposed wastewater discharge.

b. An analysis of the methods/alternatives that could be used to:

- Reduce the sources contributing to salinity in the discharge, and
- Mitigate or reduce continued impacts to groundwater from the discharge.

This analysis should include consideration of eliminating percolation as a means of disposal in favor of expanded reclamation use.

c. A description of the tasks, costs, and time required to investigate and implement various elements in the Salinity Evaluation and Minimization Plan.

d. A plan for monitoring the results of the Salinity Evaluation and Minimization Plan.

7. **Within one year following approval of the Salinity Evaluation and Minimization Work Plan**, the Discharger shall submit a **Salinity Evaluation and Minimization Final Report**. At a minimum, the Final Report shall include:

a. Summary and findings associated with Salinity Evaluation and Minimization Work Plan activities.

b. Proposed method(s) of compliance with the Salinity Control Program.

c. Proposed methods/alternatives for reducing the sources of salinity that discharge into the facility wastewater streams.

d. Identification of the recommended source control measures to decrease salinity concentrations at Facility process water components, where necessary.

8. By **16 July 2026**, the Discharger shall submit an Operation and Maintenance Plan. The Plan shall address how all synthetically lined ponds/basins at the Facility will be operated and maintained. The Plan shall propose the procedures for adequately monitoring each pond/basin's liner integrity. The Plan shall discuss what actions will be taken if the pond liner monitoring shows that the pond liner integrity has been compromised.

9. By **60 days after construction of the lined effluent storage ponds** the Discharger shall submit a Post-Construction Report that describes the ponds construction details and certifies the effluent storage pond was constructed as proposed and per the CQA Plan.

10. By **16 October 2026**, the Discharger shall submit a **Groundwater Quality Study Report**. The report shall present a summary of total coliform detections in groundwater samples collected from the sites monitoring wells.

If the Groundwater Quality Study shows that the discharge of waste is causing groundwater to contain total coliform concentrations statistically

greater than the Basin Plan limit then, **by 14 January 2027**, the Discharger shall submit a **Total Coliform Treatment Evaluation Workplan** that assesses the existing treatment performance, identifies any additional treatment or disinfection measures necessary to reliably meet the Basin Plan limitation of 2.2 MPN/100 mL in groundwater, and the submittal of an implementation schedule. The schedule to complete the evaluation shall be as short as practicable and shall not exceed one year after receipt of comments/approval on the workplan.

11. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three 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 four years, the discharger shall notify the Central Valley Water Board by 31 January.

12. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional’s signature and stamp.

13. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer, and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.

14. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the

Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

15. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

16. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.

17. The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23, division 3, chapter 26.

18. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

19. The Discharger shall comply with the requirements of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Water Quality Order 2022-0103-DWQ), and any subsequent revisions thereto. Water Quality Order 2022-0103-DWQ requires the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.

20. 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."

21. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

22. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and ensure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to ensure full compliance with this Order.

23. In the event of any change in control or ownership of the WWTF, the Discharger must 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.

24. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and 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 paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

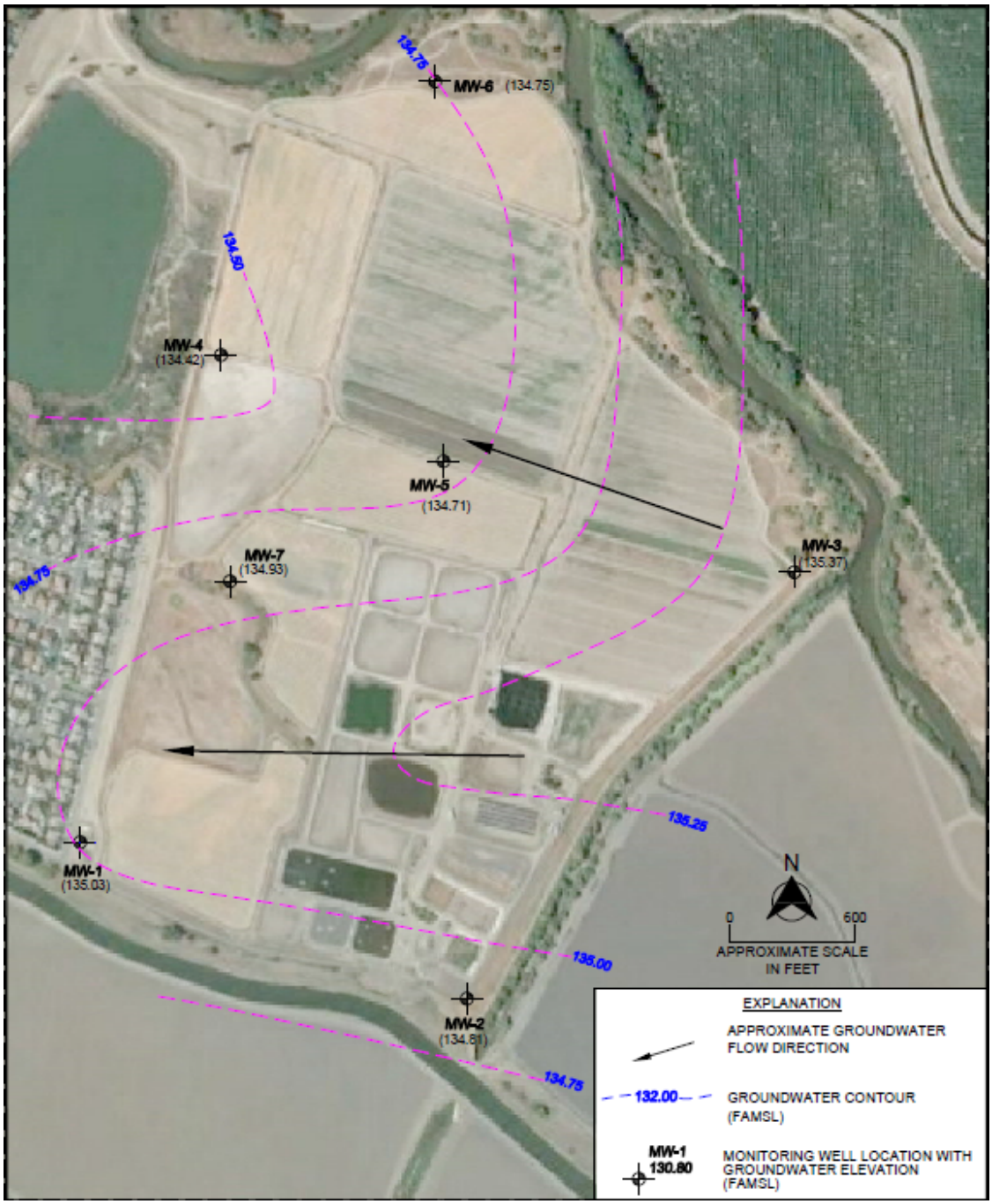
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day 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 are available on the Internet (at the address below) and will be provided upon request.

(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

ATTACHMENT A— PROJECT LOCATION MAP

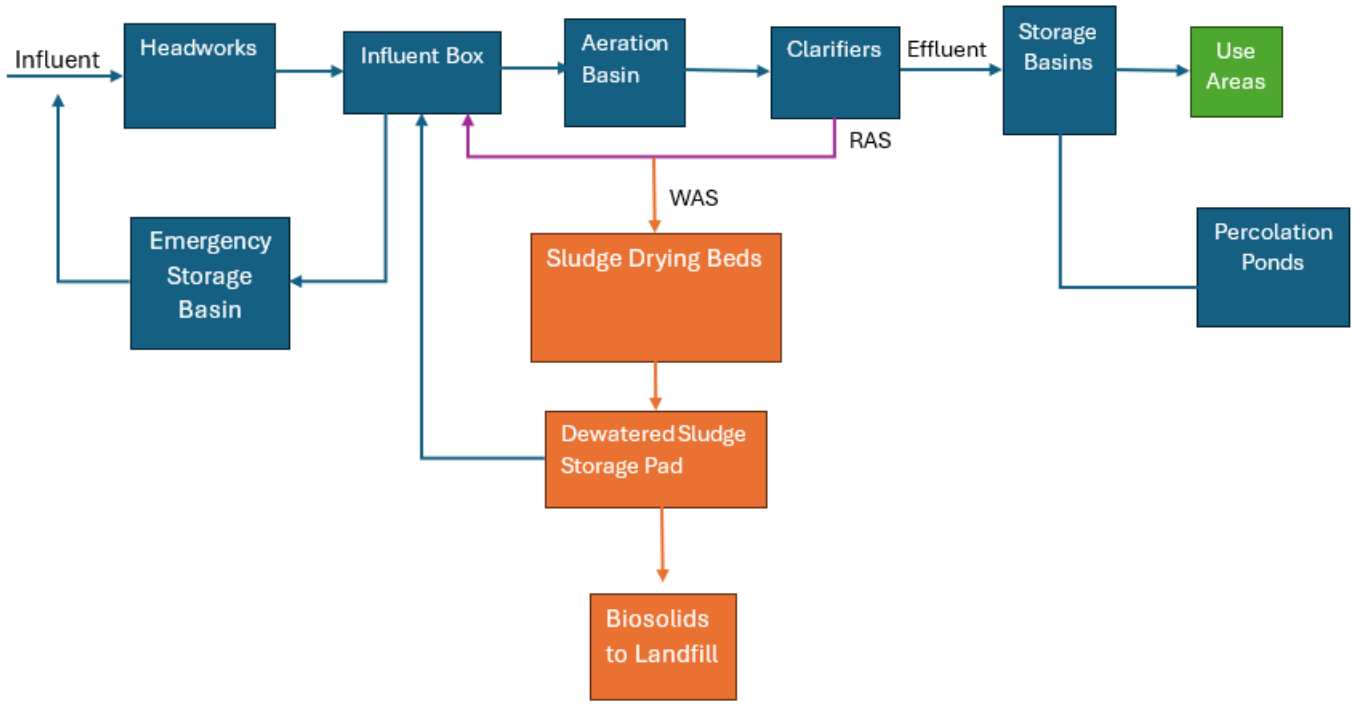
ATTACHMENT B — PROPOSED PROJECT SITE MAP

ATTACHMENT C —SITE PLAN WITH GROUNDWATER MONITORING WELLS AND GROUNDWATER ELEVATION CONTOURS



ATTACHMENT D — CURRENT USE AREAS

ATTACHMENT E — PROPOSED PROCESS FLOW DIAGRAM



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[Tentative] Waste Discharge Requirements Order R5-2026-####
for
City of Firebaugh
Firebaugh Wastewater Treatment Facility
Fresno County

INFORMATION SHEET

BACKGROUND

Waste Discharge Requirements (WDRs) Order 98-230 authorizes a discharge of up to 1.5 million gallons per day (mgd) of undisinfected secondary wastewater from the City of Firebaugh (City or Discharger) Wastewater Treatment Facility (WWTF) to evaporation/percolation ponds and irrigated land owned by the City. The WWTF provides wastewater service to approximately 9,500 residents of the City of Firebaugh and the surrounding service area. The existing facility includes a headworks, two partially mixed aeration ponds, one partially aerated polishing pond, and eleven percolation/filter ponds. On November 10, 2023, the City of Firebaugh (Discharger) submitted a Report of Waste Discharge (RWD), a Title 22 Engineering Report, and a signed Form 200 for the proposed upgrade of the Firebaugh WWTF. The Form 200 was signed by Ben Gallegos (City Manager) with the City of Firebaugh.

The City's initial WWTF was located in the northern portion of the City near the San Joaquin River. However, the original facility was undersized and lacked adequate land for effluent disposal. As a result, a site in the southern portion of the City was acquired, and the existing WWTF was constructed in 1978. At the time of development, the City's population was approximately 3,500, and the average daily wastewater flow was less than 300,000 gallons per day. Relocation of a new WWTF required expansion of the main Firebaugh lift station and construction of a force main connecting the lift station to the new WWTP location. At that time, the WWTF consisted of a headworks, an aeration pond, polishing ponds, sand evaporation–percolation ponds, and natural sand filters. The aeration pond was equipped with four surface aerators. The Facility was designed to treat an average daily flow of 0.5 million gallons per day. Approximately 230 acres were acquired for the site to provide adequate land for future expansion and disposal of treated effluent.

The technical report included in the RWD was prepared by Gouveia Engineering Inc.; however, it was not signed or stamped by a registered professional engineer. On 29 November 2023, Alfonso Manrique, RCE 63673, of AM Consulting Engineers (AMCE) submitted a signed and stamped copy of the RWD on behalf of the Discharger. On 26 September 2024, Staff notified the Discharger that the May 2024 RWD and subsequent submittals provided sufficient information to draft Waste Discharge Requirements (WDRs). However, due to potential funding constraints, the Discharger

submitted a revised RWD with a reduced scope of work on 1 July 2025. Following several discussions with the Division of Financial Assistance (DFA), it was determined that the Discharger would receive sufficient funding to proceed with the original scope of work, as described in the May 2024 Revised RWD and associated technical documentation. On 11 July 2024, the Division of Drinking Water (DDW) reviewed and approved the Title 22 Engineering Report.

WASTEWATER GENERATION AND DISPOSAL

The new WWTF will feature an extended aeration activated sludge plant with biological nutrient removal. The upgraded WWTF will consist of a new expanded headworks, operations building, an extended aeration activated sludge basin with a floating chain aeration system, two clarifiers, sludge pumping station, and artificial-media sludge drying beds with sludge storage pad. A new blower room will be constructed on the north side of the existing operations building and will house three 75-horsepower positive displacement blowers. A 12-inch manifold will connect the blower discharge to each floating header. Each floating header will be anchored at both ends with stainless steel cables.

The proposed upgrades will be designed to handle average daily flows of up to 1.5 mgd and a peak flow of 3.0 mgd. Effluent disposal will be via percolation and irrigation on the City's Use Areas (approximately 151 acres). According to the RWD, several of the existing filter/percolation ponds will be combined and equipped with a high-density polypropylene (HDPE) liner to create two lined effluent storage ponds with a combined total storage capacity of 56 acre-feet for periods when irrigation demand is low. Updated design plans submitted on behalf of the City indicate that the extended aeration activated sludge basins will be lined with six inches of concrete.

GROUNDWATER CONDITIONS

Groundwater conditions are discussed in Findings 69 through 86 of the Order.

ANTIDEGRADATION

State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of "high quality waters" unless it is shown that such degradation: (1) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; (2) will be consistent with the maximum benefit to the people of the State; and (3) is minimized through the discharger's best practicable treatment or control (BPTC).

Antidegradation analysis and conclusions are discussed in Findings 105 through 111 of the Order.

DISCHARGE PROHIBITIONS, LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS

The proposed Order prohibits the discharge of waste to surface water and water drainage courses. This Order includes a flow limit of 1.5 mgd and sets an effluent limit for 5-day biochemical oxygen demand and total suspended solids of 40 mg/L as a monthly average and 80 mg/L as a daily maximum. For salinity, this Order sets a Performance-based Salinity Limit of 2,000 µmhos/cm. This Order also prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses.

The Order also contains the following provisions including:

- Provisions J.3 requiring compliance with the Salt and Nitrate Control Programs.
- Provision J.5 requiring the Discharger to prepare and implement a Wastewater and Nutrient Management Plan.
- Provision J.6 and J.7 requiring the Discharger to prepare and implement a Salinity Evaluation and Minimization Plan.
- Provision J.8 requires the Discharger to submit an Operation and Maintenance Plan describing how all lined ponds/basins will be operated/maintained.
- Provision J.9 requiring the submittal of a Post Construction Report certifying that the lined effluent storage ponds were constructed in accordance with the CQA Plan.
- Provision J.10 requiring the submittal of a Groundwater Quality Study Report to assess potential impacts to groundwater from total coliform organisms present in the discharge.

Groundwater limitations establish that the release of waste constituents from any portion of the Facility shall not cause or contribute to the exceedance of water quality objectives (WQOs) in the receiving water. If the Facility's discharge contains waste at a level greater than a WQO but the groundwater receiving the waste remains below the WQO, the limitation would not be violated. However, if the same discharge contains waste at a level greater than the WQO and causes the receiving water to exceed a WQO, the groundwater limitation would be violated. Similarly, if the same discharge contains waste above the WQO and the receiving water is above the objective, the Facility's discharge would be contributing to an exceedance of the WQO and would be violating the receiving water limitation, if the receiving water natural background concentration is less than the WQO.

In the scenario where the level of waste in the Facility's discharge is below the WQO and the receiving water exceeds the WQO, the limitation would not be violated. Where natural background conditions exceed the WQO, compliance would be evaluated considering the established natural background concentration instead of the WQO. Only discharges causing or contributing to the exceedance of the WQO or natural background concentration (if greater than the WQO) in the groundwater would be in violation of the limitation.

The Basin Plan contains the following in Section 3 Water Quality Objectives:

> "The objectives contained in this plan, and any State or Federally promulgated objectives applicable to the basins covered by the plan, are intended to govern the levels of constituents and characteristics in the main water mass unless otherwise designated…"

Any analysis of the above factors to determine exceedances of groundwater limitations would consider this and other guidance from the Basin Plan (e.g., hydrogeologic and background characterization studies, regional groundwater flow and dilution, operation of the facility's groundwater interceptor ditch system, etc.).

MONITORING REQUIREMENTS

Section 13267 of the California Water Code authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impacts of waste discharges on waters of the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate. The Order includes influent, effluent, pond, source water, groundwater, and sludge/biosolids monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications in the Order.

SALT AND NITRATE CONTROL PROGRAMS REGULATORY CONSIDERATIONS

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These Basin Plan amendments became effective on 17 January 2020 and were subsequently revised by the Central Valley Water Board in 2020 to make targeted revisions required by the State Water Board through adoption of Resolution R5-2020-0057, which became effective 10 November 2021.

The Discharger received a Notice to Comply (NTC) for the Salt Control Program, as well as a subsequent "nudge" letter for not responding by the required response date in the NTC. The Discharger was issued **CV-SALTS ID 2664**. According to our records, the Discharger selected Pathway 2, the Alternative Compliance Pathway Approach, and is an active participant in the Prioritization and Optimization Study (P&O Study).

On 29 December 2023, Central Valley Water Board staff sent the Discharger a NTC for the Nitrate Control Program. The Facility is in the Delta-Mendota Basin which is a Priority 2 Basin, and Central Valley Water Board records indicate that the Discharger is a current participant in good standing with the Delta-Mendota Valley Water Collaborative.

The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. More information regarding the CV-SALTS regulatory planning process can be found online. (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

REOPENER

The conditions of discharge in the Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

LEGAL EFFECT OF RESCISSION OF PRIOR WDRS OR ORDERS ON EXISTING VIOLATIONS

The Central Valley Water Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement action to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.