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**[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER**  
**R5-2023-####**

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**ORDER INFORMATION**

<b>Order Type(s):</b>	Waste Discharge Requirements (WDRs)
<b>Status:</b>	Tentative
<b>Program:</b>	Non-15
<b>Region 5 Office:</b>	Fresno
<b>Discharger(s):</b>	Central Valley Meat Company, Inc.; Lawrence and Shirley Coelho Revocable Trust; Tri West Investment LLC; John and Shanda Mello Living Trust; Chip J. Mello and Kelly H/W; Chip J. Mello; Chip J. Mello/John and Shanda Mello Living Trust; and Douglas E. Martin
<b>Facility:</b>	Hanford Beef Processing Facility
<b>Address:</b>	10431 8 ¾ Avenue, Hanford, CA 93230
<b>County:</b>	Kings County
<b>Parcel Nos.:</b>	For list of parcel numbers see Attachment A
<b>Prior Order(s):</b>	R5-2008-0017

## 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 **June 2023**.

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PATRICK PULUPA,  
Executive Officer

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## **GLOSSARY**

ALR .....	Action Leakage Rate
APN(s).....	Assessor Parcel Number(s)
Antidegradation Policy.....	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
Basin Plan .....	Water Quality Control Plan for Tulare Lake Basin
bgs .....	Below Ground Surface
BOD .....	Biochemical Oxygen Demand (general term)
BOD[5] .....	[Five-Day] Biochemical Oxygen Demand at 20°Celsius (specific analysis)
BPTC.....	Best Practicable Treatment or Control
CAF .....	Cavitation Air Flotation
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
COC[s] .....	Constituent[s] of Concern
DAF .....	Dissolved Air Flotation
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
gpd .....	Gallons Per Day
gpm .....	Gallons Per Minute
LAA(s) .....	Land Application Area(s)
lbs/ac/yr.....	Pounds per Acre per Year
LCRS.....	Leachate Collection and Removal System
µg/L .....	Micrograms per Liter

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**GLOSSARY**

µmhos/cm.....	Micromhos per Centimeter
mg[d] .....	Million Gallons [per Day]
mg/L .....	Milligrams per Liter
msl.....	Mean Sea Level
MRP .....	Monitoring and Reporting Program
MW.....	Monitoring Well
MCL.....	Maximum Contaminant Level per Title 22
MUN .....	Municipal and Domestic Supply Beneficial Use
mJ/cm <sup>2</sup> .....	Millijoules per Square Centimeter
N.....	Nitrogen
NCP.....	Nitrate Control Program
ND.....	Non-Detect
NE .....	Not Established
NM.....	Not Monitored
ORP .....	Oxygen Reduction Potential
R[O]WD.....	Report of Waste Discharge
RCRA.....	Resource Conservation and Recovery Act
SPRRs .....	Standard Provisions and Reporting Requirements
SERC .....	State Emergency Response Commission
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
TKN.....	Total Kjeldahl Nitrogen
Unified Guidance.....	Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)
USEPA.....	United States Environmental Protection Agency
VOC[s].....	Volatile Organic Compound[s]
WDRs.....	Waste Discharge Requirements
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. Central Valley Meat Company, Inc. (Central Valley Meat), a California corporation, operates the Hanford Beef Processing Facility (Facility) leased from the Lawrence and Shirley Coelho Revocable Trust. The Facility is located approximately one mile east of Downtown Hanford in Kings County at 10431 Avenue 8 3/4, Section 32, Township 18 South, Range 22 East, Mount Diablo Base and Meridian (MDB&M).
2. The Facility and available land application areas (LAAs) are comprised of the Assessor Parcel Numbers (APNs) listed in Attachment A. Attachment A lists the following entities as owners of the various LAAs:

- Tri West Investments LLC
- Lawrence & Shirly Coelho Revocable Trust
- John & Shanda Mello Living Trust
- Chip J. Mello & Kelly H/W
- Chip J. Mello
- Chip J. Mello/John & Shanda Mello Living Trust
- Douglas E. Martin

These parties, along with Central Valley Meat Company, Inc. (Facility Operator) and Lawrence and Shirley Coelho Revocable Trust (Facility Owner) are identified as Discharger(s) for the purposes of this Order.

3. The following materials are attached and incorporated as part of this Order:
  - a. Attachment A – List of Land Application Area Owners
  - b. Attachment B – Site Location Map
  - c. Attachment C – Facility Map
  - d. Attachment D – Process Flow Schematic
  - e. Attachment E – Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports
  - f. Standard Provisions & Reporting Requirements dated 1 March 1991 ([1 March 1991 SPRRs](#))



[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/std\\_provisions/wdr-mar1991.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf)

g. Information Sheet

4. Also attached is **Monitoring and Reporting Program R5-2023-####** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs. The Discharger shall comply with the MRP and subsequent revisions thereto as ordered by the Executive Officer or adopted by the Central Valley Water Board.

### Regulatory History

5. Central Valley Meat commenced operation of the Facility in 1993 under WDRs Order 93-114 for discharge of wastewater to land from meat packing and deboning operations. WDRs Order 93-114 found that activities at the Facility prior to 1993, which included hide processing, resulted in elevated EC and chloride concentrations in shallow groundwater beneath the Facility. In addition, nitrate concentrations in groundwater downgradient of the ponds and land application areas (LAAs) exceeded water quality objectives. Hide processing at the Facility ceased prior to 1986 and is not part of current operations. WDRs Order 93-114 required reconstruction of the ponds to minimize percolation and expand reuse of wastewater for irrigation of crops. WDRs Order 93-114 was replaced by Order R5-2008-0017 on 25 January 2008.
6. WDRs R5-2008-0017 currently regulates the discharge of process wastewater generated from the Facility and authorizes a monthly average discharge flow of 0.39 mgd. In 2008, the Facility processed about 550 to 650 cows per working day. Wastewater was treated in an aerated treatment pond and placed in two storage/percolation ponds before land application on approximately 396 acres of farmland for irrigation of crops (i.e., LAAs).
7. Provision G.11 of WDRs Order R5-2008-0017 required Central Valley Meat to implement additional improvements to the wastewater pond system including lining the ponds. In 2011, Central Valley Meat completed construction on two new lined settling ponds and two lined effluent storage ponds. The two settling ponds were constructed with a six-inch concrete liner and the two storage ponds were constructed with a geosynthetic double liner consisting of a 60-mil High Density Polyethylene (HDPE) primary layer over a 40-mil HDPE bottom layer with a leachate collection and removal system (LCRS). Each effluent storage pond is equipped with a LCRS set below the primary liner and a pan lysimeter set below the secondary liner. The LCRS consist of a 590-gallon sump with a submersible pump. The Action Leakage Rate (ALR) on the LCRS is 3.18 gallons per minute (gpm). **Table 1** shows the approximate dimensions and volume of the settling and effluent storage ponds.

**Table 1 – Dimensions and Volume of Settling and Storage Ponds**

<b>Pond</b>	<b>Dimensions (feet)</b>	<b>Volume (million gallons)</b>
Settling Pond A (previously Settling Pond 3)	100 x 60 x 6	0.1
Settling Pond B (previously Settling Pond 4)	100 x 60 x 6	0.1
Storage Pond 1	426 x 285 x 20	11.4
Storage Pond 2	515 x 285 x 20	14.2

8. In 2014, Central Valley Meat completed abandonment of the three former unlined wastewater treatment and storage/percolation ponds. Activities included scraping the bottom and sides of the three ponds. Approximately 1,450 cubic yards of soil was removed from the ponds. The excavated material was sampled and transported off-site for land application as a soil amendment. After the material was removed the ponds were backfilled with clean borrow material.
  
9. On 29 October 2015, Central Valley Meat submitted a Report of Waste Discharge (RWD) to increase flows, specifically requesting a maximum daily effluent flow of 2.5 mgd. The 2015 RWD also proposed to expand the LAAs to a total of 1,420 acres. On 26 April 2016, a revised RWD was submitted with additional information regarding the application of process wastewater to the LAAs. The proposed flow limit of 2.5 mgd was based on a technical evaluation of the available effluent storage and disposal capacity. According to the 2016 RWD, the overall processing capacity at the Facility was estimated at 1,300 to 1,600 cows per day. By letter dated 27 January 2017, the Central Valley Water Board determined that the proposed expansion of the LAAs was categorically exempt (existing facilities exemption (Cal. Code Regs., tit. 14, sec. 15301)) from the provisions of the California Environmental Quality Act (CEQA), since the land has been in agricultural use and the use of food processing wastewater will be covered by WDRs.
  
10. On 8 September 2021, Central Valley Meat submitted a new Report of Waste Discharge (RWD) proposing various changes to the Facility and discharge, including the following: 1) addition of an enclosed meat rendering facility as well as a hide processing building, 2) increase the total annual flow to 365 million gallons, 3) install a dissolved air flotation (DAF) treatment unit for the discharge from the new rendering plant, 4) increase acreage of the available LAAs, and 4) conveyance of the wastewater via two irrigation pipelines (“Home Ranch Pipeline” and “Flying M Ranch Pipeline”). According to the 2021 RWD, the proposed changes would expand operations at the Facility but would not increase the overall processing capacity of 1,300 to 1,600 cows per day outlined in the 2016 RWD.

11. On 27 October 2021, the Central Valley Water Board issued Central Valley Meat a Notice of Violation for several violations of monitoring and reporting requirements of WDRs Order R5-2008-0017. The October 2021 NOV also noted the increase in wastewater flows at the Facility without the corresponding increase in LAA acreage, as proposed in the 2015 and 2016 RWDs.
12. On 6 December 2021, Central Valley Meat submitted a Revised RWD clarifying/correcting information in the September 2021 RWD. Addendums were submitted on 7 March 2022 and 17 January 2023, providing supplemental information in response to Central Valley Water Board staff questions. In the 7 March 2022 addendum and subsequent telephone conversations, Central Valley Meat clarified that the construction of the proposed hide processing building and associated infrastructure mentioned in the September 2021 RWD and associated CEQA document was part of the long-term plans for the Facility and that hide processing operations would not occur at the Facility in the near future. Therefore, these WDRs do not authorize the discharge of wastewater generated from hide processing operations.

As documented in WDRs Order R5-2008-0017 and previous WDRs Order 93-114, hide processing at the Facility prior to 1986 resulted in elevated EC, chloride, and nitrate concentrations in groundwater above the applicable water quality objectives. Central Valley Meat will need to submit a RWD for any new discharge from a hide processing facility and provide a demonstration of how wastewater would be stored and discharged in a manner that complies with the Antidegradation Policy (State Water Resources Control Board, Resolution 68-16) and is protective of underlying groundwater.

13. The WDRs for the Hanford Beef Processing Facility are being updated to ensure the discharge is consistent with applicable water quality plans and policies, and to reflect the proposed expanded operation of the Facility. WDRs Order R5-2008-0017 is rescinded and replaced by this Order.

## **Facility and Discharges**

### Existing Facility and Discharges

14. The Facility can operate up to seven days per week and process between 1,600 and 2,000 cattle per day. Wastewater is generated from various processes within the Facility, including live cattle washing, kill floor, tripe processing, carcass washes, condensers, boning room, truck washes, plant sanitation, stormwater, and other processing activities. All wastewater is collected in drains and various sumps throughout the Facility and then sent to a central aerated collection sump (Central Sump). From the Central Sump, wastewater is treated as described in Finding 24 and placed into one of the two concrete lined settling ponds. From the settling ponds, the wastewater is discharged to the two double-lined wastewater

storage ponds before being sent to the various LAAs for irrigation of crops. A Facility Map and Process Flow Schematic are included as **Attachments C** and **Attachment D**, respectively.

15. Monthly effluent wastewater flows generated at the Facility based on data from January 2019 through December 2022 Self-Monitoring Reports (SMRs) are shown in **Table 2**. Average monthly flows range from 0.33 mgd to 1.31 mgd with an annual average flow of about 0.57 mgd. (Note: the rendering facility became operational in December 2022.)

**Table 2 – Total Monthly Effluent Wastewater Flow (million gallons)**

Month	2019	2020	2021	2022
January	17.9	22.4	19.7	11.2
February	10.2	17.6	15.5	12.6
March	14.0	17.0	12.1	12.8
April	13.3	21.4	14.1	18.1
May	16.7	12.1	11.1	14.0
June	20.5	15.3	20.9	18.8
July	12.3	19.7	14.4	17.6
August	15.7	5.4	13.6	18.5
September	15.8	17.6	17.1	17.9
October	14.8	---	12.7	16.1
November	13.5	17.2	6.7	17.3
December	15.4	16.20	14.4	20.9
Total Annual Volume (Million Gallons)	180.1	181.9	172.1	195.8

16. Table 3 summarizes the annual average effluent quality data from January 2020 through December 2022. The data shows that about 30 percent of the total dissolved salts (TDS) in the effluent applied to the LAAs is a result of organic compounds.

**Table 3 – Effluent Quality**

Parameter/Constituent	Units	2020 (See 1 below)	2021	2022
EC	µmhos/cm	2,282	2,726	2,732
Nitrate (as N)	mg/L	0.46	0.59	0.59
Ammonia (as N)	mg/L	206	193	220
TKN	mg/L	242	255	252
TN	mg/L	242	255	253
BOD <sub>5</sub>	mg/L	186	136	162

Parameter/Constituent	Units	2020 (See 1 below)	2021	2022
FDS	mg/L	646	671	644
TDS	mg/L	939	973	889
Chloride	mg/L	130	134	115
Sodium	mg/L	194	209	198
Calcium	mg/L	50	55	50
Magnesium	mg/L	7.2	6.6	8.1
Sulfate	mg/L	3.5	6.8	17
Bicarbonate (as CaCO <sub>3</sub> )	mg/L	915	1,195	1,010

1 Based on data from January through December 2020 SMRs, except for February 2020 data.

17. Table 4 provides a comparison of average influent quality (before it enters the settling ponds) and effluent quality (leaving the effluent storage ponds to be sent to the LAAs) data for 2020 through 2022.

**Table 4 – Influent and Effluent Comparison (2020 – 2022)**

Parameter/Constituent	Units	Influent	Effluent
pH	pH units	7.0	7.6
BOD <sub>5</sub>	mg/L	1,228	163
EC	µmhos/cm	1,397	2,911
TSS	mg/L	499	207
TDS	mg/L	1,218	932
FDS	mg/L	573	659
Bicarbonate (as CaCO <sub>3</sub> )	mg/L	574	1,083
Carbonate (as CaCO <sub>3</sub> )	mg/L	< 1	< 1
Calcium	mg/L	21.7	51.5
Chloride	mg/L	115	123
Magnesium	mg/L	5.8	7.3
Total Nitrogen	mg/L	167	206
Potassium	mg/L	54.3	55.6
Sodium	mg/L	180	200
Sulfate	mg/L	20.6	9.1

18. The data shows a marked increase in EC and Bicarbonate between influent and effluent samples, in some part due to evapoconcentration within the lined effluent storage ponds. However, the data also shows a marked decrease in TDS between influent and effluent samples along with increasing bicarbonate concentrations. The reason for this is unclear; however, it is likely partly due to

biological oxidation and reduction reactions occurring within the effluent storage ponds resulting in reduced BOD and TSS concentrations. According to the Discharger, no chemical additives or aeration are added to the ponds.

19. As discussed in greater detail in the Salt and Nitrate Control Programs section of these WDRs, the Discharger selected to participate in the Prioritization and Optimization (P&O) Study for the Salt Control Program. As part of the requirement to maintain existing salinity levels, these WDRs include a performance-based salinity limit, which restricts the annual salt load (from the Facility's discharge) to 2.0 million pounds per year (in fixed dissolved solids [FDS]) applied to the LAAs.
20. Domestic waste generated at the Facility is handled by individual onsite septic systems regulated by Kings County.

#### Proposed Changes to Facility and Discharge

21. The proposed discharge will consist of a total annual volume of up to 365 million gallons per year (annual total). Approximately 85 percent (about 0.856 mgd) of the wastewater generated will come from the live cattle washing, kill floor cleaning, tripe processing, carcass washes, condenser, boiler room, boning room, storm drains, truck washes, plant sanitation, and other processing activities at the existing Facility. The remaining 15 percent of the wastewater (about 0.15 mgd) will be produced from the new rendering plant that will come from wash down of equipment, air scrubbers, condensate, water removed from meat and bone scraps during the cooking process, and reject from the new reverse osmosis system (replacing the existing water softeners throughout the Facility).
22. The new rendering plant is intended to provide services for the Facility, as well as the Harris Ranch Beef Company in Selma, and will be sized to potentially include other regional beef processing facilities (design capacity 10.5 million pounds per week). The rendering plant is fully enclosed and there will be no outside storage of any raw or finished product. The enclosed rendering plant is equipped with air scrubbers to control odors.
23. Construction was completed and the Rendering Plant became operational in December 2022. Central Valley Water Board staff inspected the Facility in March 2023. The Facility and Rendering Plant appeared to be in good condition. No significant odors were observed beyond the immediate vicinity of the rendering plant, collection sumps, or wastewater storage ponds.
24. Wastewater treatment at the Facility consists of collection sumps, hydrostatic wedge wire screens, a new dissolved air flotation (DAF) treatment unit to pretreat the rendering wastewater, two cavitation air flotation (CAF) units for treatment of

the comingled wastewater (process wastewater and stormwater), two concrete lined settling ponds (labeled Settling Ponds A and B) with a combined capacity of 0.19 million gallons, and two double-lined HDPE storage ponds (labeled Ponds 1 and 2) with a combined usable capacity of 24 million gallons as shown in **Attachment C**.

25. The quality of proposed rendering wastewater after the DAF treatment unit and projected flow weighted effluent from the existing operations and the new rendering plant discharged to the settling ponds is shown in **Table 5**.

**Table 5 – Proposed Effluent Quality**

Parameter/Constituent	Units	Proposed Rendering Facility Effluent (See 1 below)	Proposed Flow-Weighted Effluent (See 2 below)
EC	µmhos/cm	1,869	2,612
Nitrate (as N)	mg/L	--	0.51
Ammonia (as N)	mg/L	--	165
TKN	mg/L	250	255
TN	mg/L	250	256
BOD <sub>5</sub>	mg/L	1,500	341
FDS	mg/L	452	642
TDS	mg/L	630	927

- 1 Quality of proposed rendering wastewater after DAF treatment unit.
- 2 Projected flow-weighted average effluent concentrations after treatment were taken from the 2021 RWD based on the percentage of existing facility flows from 2019 of 0.856 mgd and 0.150 mgd from the new rendering facility.

26. The Discharger also proposes to increase the area of its LAAs by an additional 1,189 acres for a total of 1,574 acres of LAAs (1,267 net farmable acres), as shown in **Attachment B**. The APNs and landowners of the different LAAs are provided in **Attachment A**. Central Valley Meat has retained Chip Mello as the contract farmer to manage day-to-day farming activities on the LAAs. More information about the LAAs is provided in Findings 30 to 32.
27. Solids (primarily manure) from the cattle pens and settling ponds are stockpiled in the manure storage area and hauled off-site to the Wood Industries Company Composting Facility in Tulare County, which is regulated under the Composting General Order as a Tier II composting operation (NOA 2015-0121-DWQ-R5F010). Manure storage area consists of a graded, compacted pad. Runoff from the pad is collected in drains and returned to the wastewater collection system. Other solids, such as blood, hides, and bone (not processed at the

rendering plant), are collected separately and shipped off-site for further processing, reuse, or disposal.

28. The main cattle pens, alleyways, and watering troughs are paved with concrete and graded to drain waste and stormwater runoff to the wastewater collection sumps. In addition, the temporary holding pens over the former wastewater ponds consists of compacted soil with at least 20% fines and is graded to direct runoff to the wastewater collection system. Since all runoff from the cattle holding areas is directed into the wastewater collection system regulated by these WDRs, coverage under General Order R5-2017-0058 for Confined Bovine Feeding Operations is not required at this time.
29. Stormwater from the trailer parking, paved cattle pens, warehouse truck parking, and truck wash area (under construction) is directed to the “Central Sump,” where it comingles with process wastewater and ultimately flows to the settling ponds. Stormwater from the employee parking and the paved areas south of the Rendering Plant is diverted directly to an on-site stormwater retention pond. The Discharger is not required, at this time, to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities, State Water Board Order 2014-0057 DWQ, NPDES General Permit CAS000001, since all stormwater runoff is retained onsite and does not discharge into a water of the United States.

#### **Land Application Areas (LAAs)**

30. Irrigation of the LAAs is via surface irrigation (i.e., boarder checks and/or furrows). Supplemental irrigation is provided by onsite irrigation wells and surface water from the Lakeside Irrigation District. There are three irrigation pipelines (Central Valley Meat Pipeline, Home Ranch Pipeline, and the Flying M Ranch Pipeline) used to convey wastewater to the LAAs. The LAAs and irrigation pipelines are shown in Attachment B. The Central Valley Meat Pipeline is owned by Central Valley Meat and is used to convey wastewater to the east LAAs (APN 016-130-055, 016-130-094, 016-130-037, 016-130-030, and 016-120-012). The new Home Ranch Pipeline, completed in 2022, connects Central Valley Meat’s wastewater distribution system to the Flying M Ranch Pipeline to convey wastewater to the southern LAAs (APN 016-190-020, 016-190-023, 016-190-050, 016-190-054, 016-270-007, and 016-270-031). The Home Ranch Pipeline is owned by Central Valley Meat under a perpetual easement and right-of-way agreement between Central Valley Meat and Richard and Nicklus Martella, J.L. Fragoso Cattle Company, LLC, and Kings Waste and Recycling Authority. The Flying M Ranch Pipeline is owned by Chip J. Mello. The Discharger has a perpetual easement and right-of-way agreement with Chip Mello for use of the “Flying M Ranch Pipeline” to convey wastewater to the southern LAAs.



31. The December 2021 Revised RWD includes a cycle average BOD loading rate matrix. Based on the matrix, the cycle average BOD loading rate can be maintained below 100 lbs/acre/day with a minimum five-day irrigation schedule. In general, the Discharger provides between 10 and 25 days between irrigation cycles.
32. The December 2021 Revised RWD discusses projected nutrient and salt loading rates based on flow-weighted average concentrations for the comingled wastewater and irrigation water. The proposed LAAs are cropped with alfalfa (887 acres) and double cropped corn/wheat silage (380 acres). The annual nitrogen and salt loading rates, according to the December 2021 Revised RWD, are summarized in **Table 6** below.

**Table 6 – Projected Nitrogen and Salt Loading Rates**

<b>Nitrogen Loading</b>	<b>Alfalfa (lbs/acre/year)</b>	<b>Corn (lbs/acre/year)</b>	<b>Wheat (lbs/acre/year)</b>
Gross Nitrogen Loading	690	266	291
Net Nitrogen Loading (see 1 below)	596	232	248
Crop Nitrogen Uptake Rates (see 2 below)	623	241	263
FDS Loading	4,271	2,159	1,028

- 1 Based on an assumed 10% loss via ammonia volatilization and 5% loss via soil micropore denitrification.
- 2 Nutrient removal rates derived from: Crop Nutrient Harvest Removal. 2009. University of California Cooperative Extension Manure Technical Bulletin Series. <http://manuremanagement.ucdavis.edu>. G.S. Pettygrove, Cooperative Extension Soils Specialist, and Ian Bay, Department of Land, Air, and Water Resources, University of California, Davis; and Geissler, D. 2016. Nitrogen Concentrations in harvested plant parts - a literature overview. Department of Land, Air, and Water Resources, University of California, Davis.

### **Site-Specific Conditions**

#### Topography, Climate and Land Use

33. The soils below the Facility and LAAs are primarily Kimberlina fine sandy loam, followed by Wasco Sandy Loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service. Kimberlina fine sandy loam and Wasco Sandy Loam have an irrigated land capability of 2s and 2e, respectively. Soils with “Class 2” have moderate limitations that reduce the choice of plants or that require moderate conservation practices. Soils with Subclass “s” shows that the soil may be limited for

agricultural use mainly because it is shallow, droughty, or stony. For soils with Subclass “e,” the main hazard is the risk of erosion unless close-growing plant cover is maintained.

34. The Facility and LAAs are in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from October to April. The average annual precipitation in the area is about 8.38 inches, according to the Western Regional Climate Center. Average annual pan evaporation in the area is about 80.6 inches, according to the *National Oceanic and Atmospheric Administration Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States*, published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration.
35. According to the Federal Emergency Management Agency’s (FEMA) [Flood Insurance Rate Map](https://msc.fema.gov/portal) (https://msc.fema.gov/portal), the Facility and LAAs are in Zone X. Areas in Zone X are outside of the one percent annual chance of flood with average depth less than one foot.
36. Land uses in the vicinity of the Facility and LAAs are primarily agricultural and include cultivation of corn, alfalfa, and deciduous fruit, according to the California Department of Water Resources Land Use Viewer, Statewide Crop Mapping 2019.

#### Groundwater and Subsurface Conditions

37. According to the [SGMA Data Viewer \(ca.gov\)](https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels), (https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels), regional groundwater in the vicinity of the Facility and LAA ranged from 130 to 140 feet below ground surface (bgs) and flowed to the southwest in Spring 2021 at a gradient of about 0.0025 feet/foot.
38. The Corcoran Clay layer is found below the Facility and LAAs at a depth ranging from 300 to 400 feet bgs, according to the *Depth to the Top of Corcoran Clay* map published by the Department of Water Resources in 1981.
39. A search of the GeoTracker [Groundwater Ambient Monitoring Program \(GAMA\)](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/) database (https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/) identified three wells within about five miles of the site with groundwater quality data prior to 1968. Table 7 summarizes water quality data from these wells.

**Table 7 – Groundwater Quality Prior to 1968**

Well	Date Sampled	EC (µmhos/cm)	Chloride (mg/L)	Calcium (mg/L)	Sodium (mg/L)	Nitrate as N (mg/L)
18S22E36P001M	10/30/1952	180	19	9.8	31	ND

18S22E28D001M	9/14/1956	225	12	14	35	0.6
18S22E25Q001M	2/28/1961	1,190	82	46	192	ND

40. Source water for the Facility is provided by two onsite groundwater supply wells. The main supply well is screened between 240-360 feet bgs. No details are available for the second supply well. Only one of the supply wells is sampled on a regular basis. **Table 8** below summarizes the source water data from the supply well sampling done in 2020 and 2021.

**Table 8—Source Water Quality**

Parameter/Constituent	Units	2020	2021
EC	µmhos/cm	356	366
pH	pH units	8.6	8.3
TDS	mg/L	247	256
Alkalinity (as CaCO <sub>3</sub> )	mg/L	119	101
Arsenic	mg/L	0.038	0.057
Bicarbonate (as CaCO <sub>3</sub> )	mg/L	114	110
Boron	mg/L	0.090	0.305
Calcium	mg/L	7.1	7.6
Carbonate (as CaCO <sub>3</sub> )	mg/L	5	3
Chloride	mg/L	27.6	47.4
Magnesium	mg/L	0.4	0.7
Potassium	mg/L	1.1	2.6
Sodium	mg/L	74	76
Sulfate	mg/L	17.6	12.5

41. Groundwater quality data for the area prior to 1968 is sparse. The Facility installed a groundwater monitoring well network starting in 1993. Additional wells were installed in 1997 and 2005. The monitoring well network consisted of eleven wells. Ten shallow groundwater monitoring wells (MW-2, MW-3, MW-4A, MW-5A, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11) and one deep monitoring well (MW-5B). By 2013 all of the shallow groundwater monitoring wells were dry. Construction details for the monitoring wells and the approximate dates the wells went dry or were damaged are shown in **Table 9**.

**Table 9—Former Groundwater Monitoring Well Construction Details**

Well	Date Drilled	Perforated Interval (feet bgs)	Date Well Went Dry	Location
MW-2	5/1991	100-120	1/2015	Adjacent to former ponds

Well	Date Drilled	Perforated Interval (feet bgs)	Date Well Went Dry	Location
MW-3	5/1991	105-125	4/1998	Cross-gradient of former ponds
MW-4A	2/1997	110-150	10/2013	Downgradient of former ponds
MW-5A	4/1995	107-137	7/2013	Downgradient of former ponds
MW-5B	12/1994	190-200	n/a	Downgradient of former ponds
MW-6	10/1994	115-140	4/2013	Crossgradient of former ponds
MW-7	7/1994	102-140	10/2004	Down-gradient of former LAAs
MW-8	2/1997	110-150	4/2013	Background well
MW-9	9/2004	100-140	7/2013	Downgradient of LAAs
MW-10	9/2004	100-140	7/2013	Background well
MW-11	3/2005	110-150	7/2009	Downgradient of former ponds

42. Sampling of wells MW-8 and MW-10 shows average background groundwater quality of shallow groundwater in the area was relatively good prior to 2013, with an average EC of around 610  $\mu\text{mhos/cm}$  and chloride around 55 mg/L. Nitrate concentrations were below the Maximum Contaminant Level (MCL), ranging from non-detect to 6.8 mg/L.
43. Sampling of the shallow monitoring wells (MW-2, MW-3, MW-4A, MW-5A, and MW-11) around the Facility showed elevated EC and chloride concentrations downgradient of the former storage/percolation ponds, likely due to the former hide processing operations. However, EC and chloride concentrations in these wells appeared to be decreasing before the wells went dry. Elevated EC and chloride in the deep monitoring well MW-5B adjacent to the former storage/percolation ponds indicates that the influence of the former hide processing operations likely extended vertically to at least 200 feet bgs. Chloride concentrations in MW-5B appeared to peak around 2005 but have decreased significantly since then as shown in Table 10.

**Table 10-Comparison of EC and Chloride Concentrations in MW-5B**

Constituent	Units	2005	2021	2022
Electrical Conductivity	$\mu\text{mhos/cm}$	1,520	1,357	1,428
Chloride	mg/L	383	128	138

44. In 2020, the Discharger, in response to a request by the Central Valley Water Board, installed four new groundwater monitoring wells at deeper depths due to decreasing water levels. The monitoring wells MW-12, MW-13, MW-14, and MW-15 were installed using direct rotary method. The wells have a six-inch diameter schedule 80 PVC casing. Screen slot size is 0.03 inch. Construction details for the new groundwater monitoring wells are shown in Table 11.

**Attachment B** shows the location of the current groundwater monitoring well network (consisting of the existing deep groundwater monitoring well MW-5B and the newly installed wells).

**Table 11—Existing Groundwater Monitoring Well Construction Details**

Well	Date Drilled	Perforated Interval (feet)	Depth to Groundwater (feet bgs)
MW-5B	12/1994	190-200	168.0
MW-12	11/31/2020	160-190	166.5
MW-13	11/24/2020	160-190	157.6
MW-14	11/20/2020	155-185	146.7
MW-15	11/18/2020	150-180	126.1

45. Monitoring wells MW-5B (adjacent to the former wastewater ponds) and MW-12 (adjacent to field 4) are downgradient of the Facility and the western LAAs and MW-14 (adjacent to Field 5) is downgradient of the eastern LAAs. Monitoring wells MW-13 and MW-15 are upgradient to the western and eastern LAAs, respectively. There are currently no monitoring wells around the proposed southern LAAs.
46. Groundwater data from the current monitoring well network (MW-5B, MW-12, MW-13, MW-14, and MW-15) from quarterly sampling in 2021 and 2022 is shown in Table 12. According to the 1<sup>st</sup> Quarter 2022 Groundwater Monitoring Report, groundwater below the Facility flows in the west direction.

**Table 12—Groundwater Quality from On-Site Monitoring Wells**

Parameter	Units	MW-5B	MW-12	MW-13	MW-14	MW-15
Depth-to-Groundwater (see 1 below)	feet bgs	134.8 to 170.6	152.6 to 170.0	147.2 to 160.0	135.4 to 150.1	104.8 to 131.3
EC	µmhos/cm	1,304	846	760	1,220	623
Nitrate (as N)	mg/L	0.2	0.9	4.5	13	9.0
Total Nitrogen	mg/L	1.1	1.5	5.3	13.5	9.0
TDS	mg/L	870	553	463	770	393
Calcium	mg/L	76	38	25	85	43
Magnesium	mg/L	2.0	1.5	<0.1	10	4
Sodium	mg/L	234	145	131	165	86

Parameter	Units	MW-5B	MW-12	MW-13	MW-14	MW-15
Potassium	mg/L	2.0	1.0	<1.0	<1.0	<1.0
Chloride	mg/L	136	110	95	161	51
Sulfate	mg/L	25	78	76	91	22
Arsenic	mg/L	0.018	0.020	0.079	0.017	0.011
Boron	mg/L	0.2	0.1	<0.1	<0.1	<0.1
Iron	mg/L	0.04	<0.03	<0.03	<0.03	<0.03
Manganese	mg/L	0.09	0.03	<0.01	0.09	0.04

1 Depth to groundwater in MW-5B based on data collected from 2013 – 2022. Depth to groundwater in MW-12 through MW-15 based on data collected from 2021 - 2022.

- 47. Based on sampling data from MW-13 and MW-15, background groundwater quality is similar to the historic data reported for shallow background monitoring wells MW-8 and MW-10 for salinity constituents. Monitoring well MW-14 shows elevated EC and nitrate concentrations possibly related to an upgradient feedlot adjacent to Field 5.
- 48. The existing groundwater monitoring well network does not cover the new southern LAAs. To address this the Order requires the Discharger to evaluate the existing groundwater monitoring well network and submit a Work Plan to install additional monitoring wells to monitor upgradient and downgradient groundwater conditions around the southern LAAs.

**Statutory Authority**

49. 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.*

- 50. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.
- 51. 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).)
- 52. This Order and its associated MRP are also 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.*

53. 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.

#### **Basin Plan Implementation**

54. Pursuant to Water Code section 13263, subdivision (a), WDRs must “implement any relevant water quality control plans... 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 Section 13241.”

#### **Beneficial Uses of Water**

55. This Order implements the Central Valley Water Board’s Water Quality Control Plan for the Tulare Lake 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.)
56. Local drainage is to Valley Floor Waters. The beneficial uses of Valley Floor Waters within the subject hydrologic area (Hanford–Lemoore Hydrologic Area No. 551.90) include the following: agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); and groundwater recharge (GWR).
57. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility include the following: municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1), and wildlife habitat (WILD).

### Water Quality Objectives (WQOs)

58. The narrative WQO for chemical constituents in groundwater provides that groundwater shall not contain constituents in concentrations adversely affecting beneficial uses. MUN-designated groundwaters must meet the primary and secondary maximum contaminant levels (MCLs) specified in California Code of Regulations, title 22 (Title 22).<sup>1</sup> (See Title 22, §§ 64431, 64444, 64449.)
59. 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.
60. 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.
61. To the extent necessary, narrative WQOs are quantified on a site-specific basis as numeric limits for constituents with potential to adversely impacted designated beneficial uses. In determining a site-specific numeric limit, the Central Valley Water Board considers relevant published criteria.
62. In determining a numeric limit for salinity protective of agricultural supply (AGR), the Central Valley Water Board relies on general salt tolerance guidelines, which indicate that although yield reductions in nearly all crops are not evident when irrigation water has an electrical conductivity (EC) of less than 700  $\mu\text{mhos/cm}$ , there is an eight- to ten-fold range in salt tolerance for agricultural crops. (See, e.g., Ayers & Westcot, *Water Quality for Agriculture* (1985), § 2.3.) For this reason, appropriate salinity values are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000  $\mu\text{mhos/cm}$ , if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.
63. 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 where groundwater quality is potentially affected by the discharge, but it is representative of current and historical agricultural practices in the area.

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<sup>1</sup> 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.



### Salt and Nitrate Control Programs

64. 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 with [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) ([https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/resolutions/r5-2020-0057\\_res.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf)).
65. For the Salt Control Program, dischargers that are unable to comply with the stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger was issued a Notice to Comply for the Salt Control Program (**CV-SALTS ID: 2112**) on 5 January 2021. On 20 July 2021, the Central Valley Water Board received a Notice of Intent for the Facility. The Discharger has elected to participate in the P&O Study. In the interim, to maintain existing salt discharges and minimized salinity impacts this Order does the following:
  - a. Sets a Salinity Mass Loading Limit of 2.0 million pounds of FDS for the discharge of wastewater sent to the LAAs.
66. For the Nitrate Control Program, dischargers unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers may comply with the new nitrate program either individually (Pathway A) or collectively with other dischargers (Pathway B). For the Nitrate Control Program, the discharge falls within Groundwater Sub-Basin 5-22.12 (San Joaquin Valley – Tulare Lake), a Priority 2 basin/sub-basin. As an existing Facility proposing to increase nitrate contributions from expanded operations, the Discharger was required to comply with the Nitrate Control Program as part of the Report of Waste Discharge. On 20 July 2021, the Discharger submitted a Nitrate Control Program Notice of Intent and elected to join the Kings Water Alliance Management Zone.
67. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs. As such this Order may be amended or modified to incorporate any newly applicable requirements to ensure that the goals of the Salt and Nitrate Control Programs are met.

### **Special Considerations for High Strength Waste**

68. For the purpose of this Order, “high strength waste” is defined as wastewater that contains concentrations of readily degradable organic matter that exceed typical concentrations of domestic sewage. Such wastes contain greater than 500 mg/L BOD. Typical high strength wastewaters include septage, some food processing wastes (e.g., slaughterhouse wastes), winery wastes, and rendering plant wastes.
69. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through the implementation of best management practices, which include planting crops to take up plant nutrients and maximizing oxidation of BOD<sub>5</sub> to prevent nuisance conditions.
70. Regarding BOD, excessive application 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. When insufficient oxygen is present below the ground surface, anaerobic decay of the matter can create reducing conditions that convert metals that are naturally present in soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.
71. Typically, irrigation with high strength wastewater results in heavy loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.
72. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency, cites BOD loading rates in the range of 36 to 600 lbs/ac/day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that supported this report did not evaluate actual or potential groundwater degradation associated with those rates. There are few studies that have attempted to determine maximum BOD

loading rates for protection of groundwater quality. Those that have been done are not readily applicable to the varying soil, groundwater, and climate conditions that are prevalent throughout the region.

73. The California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water* (Manual of Good Practice) proposes risk categories associated with particular BOD loading rate ranges as follows:
- a. Risk Category 1: (less than 50 lbs/ac/day; depth to groundwater greater than 5 feet) Indistinguishable from good farming operations with good distribution important.
  - b. Risk Category 2: (less than 100 lbs/ac/day; depth to groundwater greater than 5 feet). Minimal risk of unreasonable groundwater degradation with good distribution more important.
  - c. Risk Category 3: (greater than 100 lbs/ac/day; depth to groundwater greater than 2 feet) Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.

The Manual of Good Practice recommends allowing a 50 percent increase in the BOD loading rates in cases where sprinkler irrigation is used, but recommends that additional safety factors be used for sites with heavy and/or compacted soils.

74. Although it has not been subject to a scientific peer review process, the Manual of Good Practice provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals. These WDRs establish a BOD cycle average loading rate of 100 pounds per acre per day to prevent odor conditions from occurring and to prevent groundwater degradation due to reduced metals.

### **Antidegradation Policy**

75. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Resources Control 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 the discharge(s) causing such degradation will be consistent with the maximum benefit to the people of California, will not unreasonably affect beneficial uses, and will not result in water quality worse than applicable WQOs. Any discharge to high quality waters must meet requirements that will result in the best practicable treatment or control (BPTC)

necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

76. Groundwater monitoring at the Facility dates to 1993. Given the limited availability of pre-1968 water quality information, compliance with the Antidegradation Policy will be determined based partly on pre-1968 water quality and site-specific groundwater data, as discussed below (Antidegradation Baseline). Table 13 compares effluent data for constituents of concern with pre-1968 and existing upgradient and downgradient groundwater quality data.

**Table 13—Constituents with Potential for Degradation**

Constituent	Units	Proposed Flow-Weighted Effluent (See 1 below)	Pre-1968 Groundwater Quality (see 2 below)	Upgradient (See 3 below)	Downgradient (See 4 below)	WQOs
BOD	mg/L	341	---	---	---	---
Nitrate (as N)	mg/L	0.51	<0.2-0.6	9.0	0.2 - 12.97	10
TN	mg/L	256	---	9.0	1.1 - 12.53	---
EC	µmhos/cm	2,612	180 – 1,190	623	760 - 1,304	900 - 1,600
TDS	mg/L	927	---	393	463 - 870	500 - 1,000
FDS	mg/L	642	---	---	---	---
Iron	mg/L	---	---	<0.03	<0.03 - 0.04	0.3
Manganese	mg/L	---	---	0.04	<0.01 - 0.09	0.05
Arsenic	mg/L	---	---	0.011	0.017 - 0.079	0.01

1. Projected flow-weighted average effluent concentrations provided in the 2021 RWD based on a flow of 0.856 mgd from the existing Facility wastewater and 0.150 mgd from the new rendering facility
2. Pre-1968 groundwater quality based on samples collected between 1952 and 1961 from three wells within five miles of the Facility (see Table 7).
3. Upgradient (Background) groundwater quality based on groundwater data from 2021 through 2022 for MW-15.
4. Downgradient groundwater quality based on groundwater data from 2021 through 2022 for MW-12, MW-13, MW-14, and groundwater data from January 2013 through 2022 for MW-5B.
  - a. **Organics.** The Facility has high-strength process wastewater, with BOD<sub>5</sub> concentrations around 341 mg/L in the effluent sent to the LAAs. Application of organic material (as measured by BOD<sub>5</sub>) at excessive rates can cause anaerobic conditions that may result in nuisance odor conditions,

dissolution of metals, and degradation of groundwater. This Order requires the Discharger to apply wastewater to the LAAs at agronomic rates and limits the cycle average BOD loading rate to less than 100 lbs/acre/day. Given wastewater storage in lined ponds and implementation of best management practices including rotating fields and even application of wastewater, the discharge should not cause odor or nuisance conditions or significantly degrade groundwater quality with constituents related to organic overloading.

- b. **Metals.** As discussed above, heavy organic and hydraulic loading can create reducing conditions in soil, causing dissolution of metals and degradation of groundwater for metals such as iron, manganese, and arsenic. Groundwater data provided in Table 13 shows iron and manganese concentrations in groundwater monitoring wells below or just at the applicable WQOs. Arsenic concentrations in both upgradient and downgradient monitoring wells exceed the WQO for arsenic of 10 µg/L, likely due to natural arsenic concentrations in the Hanford area. With storage in lined ponds and implementation of best management practices, including rotating fields and even application of wastewater at agronomic rates, the discharge should not significantly degrade groundwater quality for metals.
- c. **Nitrogen.** For nitrogen, based on the available data, background groundwater quality of nitrate (as N) in the vicinity of the Facility and LAAs is highly variable, ranging from non-detect to 13 mg/L (above the primary MCL of 10 mg/L). Nitrogen in the discharge is primarily in the form of TKN and ammonia, which can readily convert to nitrate with some loss from volatilization. Based on the effluent quality and groundwater monitoring, the discharge may cause some groundwater degradation for nitrate.

To protect groundwater quality, this Order requires the application of nitrogen from wastewater, supplemental irrigation water, and applied fertilizers to be at reasonable agronomic rates. Calculations show that, at the proposed annual flow limit of 365 million gallons and with the available 1,267 net farmable acres, the Discharger can meet agronomic loading rates for nitrogen with careful management of the LAAs, including crop types and field rotations. With storage in lined ponds and application at agronomic rates, the discharge should not cause significant degradation of groundwater for nitrates. In addition, the Discharger have joined the Kings Water Alliance Management Zone Group to address nitrate impacted groundwater within the Kings Groundwater Subbasin.

- d. **Salts.** For salts, based on the available data, background groundwater quality in the vicinity of the Facility and LAAs is relatively good, with an EC

of approximately 630  $\mu\text{mhos/cm}$  and TDS of approximately 400 mg/L. The December 2021 RWD estimates the Facility's proposed effluent (based on data from 2021 and expected effluent quality from the new rendering plant) will have the following salinity concentrations/levels: EC approximately 2,612  $\mu\text{mhos/cm}$ , TDS approximately 927 mg/L, and FDS approximately 642 mg/L. These salinity concentrations/levels have the potential to degrade underlying groundwater and potentially result in groundwater exceeding applicable water quality objectives.

Groundwater monitoring shows downgradient monitoring wells exceed the lower secondary MCLs (and the 700  $\mu\text{mhos/cm}$  objective for AGR), but are still below the upper secondary MCLs for EC and TDS of 1,600  $\mu\text{mhos/cm}$  and 1,000 mg/L, respectively. To comply with the Salt Control Program, the Discharger elected to participate in the P&O Study, a basin-wide planning effort to develop a long-term salinity strategy for the Central Valley. Meanwhile, to help ensure that the Discharger continues to implement salinity reduction and control measures and protect groundwater quality, this Order limits the annual cumulative salt load for FDS in the discharge to the LAAs to 2.0 million pounds per year. Furthermore, this Order requires the Discharger to continue to comply with the Salt Control Program (i.e., participate in the P&O Study).

77. The Discharger implements, or will implement, as required by this Order the following measures, which the Central Valley Water Board has determined constitutes BPTC. These measures will minimize the extent of water quality degradation resulting from the Facility's discharges:
- a. Pre-treatment of rendering wastewater by a DAF unit;
  - b. Treatment of comingled wastewater (process wastewater and stormwater) by two CAF units;
  - c. Treatment of wastewater in two concrete lined settling ponds and storage of treated wastewater in two double lined HDPE storage ponds;
  - d. Compliance with the Salt and Nitrate Control Programs;
  - e. BOD cycle average loading rate less than 100 lbs/acre/day;
  - f. Application of wastewater, irrigation water, and fertilizers at agronomic rates; and
  - g. Contract farmer to manage day-to-day farming activities on the LAAs.

78. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the state and, therefore, sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. Degradation of groundwater by some typical waste constituents released with discharge from the Facility, after effective source reduction, treatment, and control, and considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the State.
79. The Facility contributes to the economic prosperity of the region by providing for employment of 1,342 employees (1,205 regular employees, 13 US Department of Agriculture [USDA] inspectors, and 125 new employees with Facility expansion) and by providing a tax base for local and county governments. The new rendering facility also allows the Discharger to provide sanitary disposal of byproducts from animal processing. Rendering is the only approved method currently available in California to dispose of animal byproducts. Accordingly, to the extent that any degradation occurs as the result of the Facility's operation, such degradation is consistent with the maximum interest of the people of the State of California. In addition, the reuse of process wastewater for irrigation of crops, rather than higher quality groundwater, is of further benefit to the people of the State.
80. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

### **California Environmental Quality Act**

81. In accordance with CEQA, Public Resources Code section 21000 et seq., Kings County Community Development Agency, as lead agency, approved an Initial Study/Mitigated Negative Declaration for expansion of the existing Hanford Beef Processing Facility (SCH: 2021050342) on 13 September 2021. The proposed Project includes construction of a new fully enclosed rendering plant, a new pet food facility, and hide processing facility as well as additional facilities for the existing beef slaughter operation. The Mitigated Negative Declaration determined that the proposed Project would not have a significant effect on the environment provided the specified mitigation measures were implemented.
82. The Central Valley Water Board, as a responsible agency under CEQA, was consulted in the lead agency's development of the Mitigated Negative Declaration. The discharges and other activities authorized under this Order also fall within the scope of the proposed Project, as contemplated in the Mitigated Negative Declaration.

### **Other Regulatory Considerations**

#### Water Code Section 13149.2

83. These WDRs regulate a facility that may impact a disadvantaged community and nearby tribal communities and includes an alternative compliance path that allows the Discharger time to come into compliance with water quality objectives (i.e., nitrogen and salinity). The Discharger has joined with other dischargers in the Kings Water Alliance Management Zone as part of the Nitrate Control Program to ensure safe drinking water for affected person(s). In addition, 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. Pursuant to Water Code section 13149.2, and as discussed in the following findings, the Central Valley Water Board reviewed readily available information and information raised by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of this Order. The Board also considered environmental justice concerns within the Board's authority previously raised by interested persons with regard to those impacts.
84. The Central Valley Water Board anticipates that the issuance of this Order will result in water quality impacts within the scope of the Board's authority. Specifically, this Order authorizes the continued discharge of wastewater with salinity concentrations above applicable WQOs and total nitrogen concentrations at levels that could cause nitrate in groundwater to be above the 10 mg/L MCL. The Facility's proposed effluent quality has an average EC around 3,000 µmhos/cm, TDS average around 900 mg/L, and total nitrogen average around 250 mg/L. While these concentrations exceed (or could result in groundwater exceeding) the WQOs for groundwaters designated for MUN (municipal and domestic supply), the available groundwater data indicates the Facility has made significant changes to reduce the Facility's future impacts on underlying groundwater.
85. Based on available data, the current discharge is not causing a significant impact to the surrounding community. Water quality data from nearby wells show water quality levels below the applicable drinking water MCLs for salinity and nitrate (see Groundwater and Antidegradation sections for further information). The Central Valley Water Board has identified the following measures available and within the scope of its authority to address the impacts of the Facility to nearby disadvantage communities in Kings County: 1) requires active participation in the



P&O Study and compliance with the Salt Control Program, which is intended to identify long-term salinity management and control practices and/or technologies; 2) requires active participation in the Kings Water Alliance Management Zone and compliance with the Nitrate Control Program, which has the goals to ensure safe drinking water supply and achieve balance nitrate loading within the management zone; 3) maintain current discharge concentrations for salt (e.g., establishing a performance-based salinity limit); 4) requires the Discharger to properly maintain its lined wastewater effluent storage ponds; and 5) requires application of wastewater and fertilizer to crops at agronomic rates with irrigation of supplemental water as needed. All of these measures are required by this Order.

#### Human Right to Water

86. 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 and nitrate), 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 SCP and NCP, respectively. Although the Basin Plans’ Exceptions Policy for Salinity and Nitrate allows participants in these Programs to obtain limited-term exceptions from MCLs for salinity and nitrate, these Programs are consistent with the Human Right to Water Policy because their over-arching management goals and priorities include short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable

#### Threat-Complexity Rating

87. 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

88. This Order, which prescribes WDRs for discharges of wastewater, 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).)

### Stormwater

89. Stormwater from parking areas at the Facility is routed to an onsite unlined stormwater basin where it either percolates into the underlying soil or evaporates. Stormwater from areas within the central portion of the Facility or the animal collection pens where it may come in contact with waste materials is diverted into the wastewater collection system and comingled with the wastewater. Because all stormwater at the Facility is collected and disposed of onsite, the Discharger is not required to obtain coverage 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) at this time.

### Scope of Order

90. This Order is strictly limited in scope to those waste discharges, activities and processes described and expressly authorized herein. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as “Dischargers,” subject only to the discretion to designate or substitute new parties in accordance with this Order.
91. Pursuant to Water Code section 13264, subdivision (a), the Dischargers are 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 (RWD) per Water Code section 13260.
92. Failure to file a new RWD before initiating material changes to the character, volume, or timing of discharges authorized herein shall constitute an independent violation of these WDRs.

### Procedural Matters

93. 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.

94. 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.)
95. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
96. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

## **REQUIREMENTS**

It is Hereby Ordered, pursuant to Water Code sections 13263 and 13267, that WDRs Order R5-2008-0017 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 Dischargers shall comply with the [1 March 1991 SPRRs](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf)  
[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/std\\_provisions/wdr-mar1991.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf), which are incorporated by reference herein.

### **B. Discharge Prohibitions**

1. Waste classified as "hazardous" (per Title 22, § 66261.1 et seq.), shall not be discharged at the Facility under any circumstance.
2. Waste constituents shall 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,"<sup>2</sup> as defined per Water Code section 13050.

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<sup>2</sup> Discharges of constituents covered by the Salt and Nitrate Control Programs are considered to not cause pollution conditions provided the Discharger remains in compliance with the Programs.

3. Discharge of wastes other than the Facility's treated process wastewater at the locations and in the manner described in the Findings and authorized herein is prohibited.
4. Except as otherwise expressly authorized in this Order, waste shall not be discharged to surface waters or surface water drainage courses (including irrigation ditches outside of Discharger's control).
5. Waste shall not be discharged from the Facility in a manner other than as described in this Order.
6. Discharge of toxic substances into any wastewater treatment system or the LAAs such that biological treatment mechanisms are disrupted is prohibited.
7. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
8. Discharge of domestic wastewater to the process wastewater treatment system, lined ponds, and/or LAAs fields is prohibited.

**C. Flow Limitations**

1. Effluent discharged from the Facility to the LAAs shall not exceed a total annual discharge of 365 million gallons (monitored at EFF-001).

**D. Salinity Limit**

1. The cumulative mass load of salt from the discharge shall not exceed 2.0 million pounds per year (calculated as the cumulative salt load from effluent FDS applied to the LAAs on a monthly basis, as described in sections III.B.12 and III.B.14 of the MRP).

**E. Discharge Specifications**

1. The discharge shall remain within the permitted waste treatment/containment structures and LAAs 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. Objectionable odors shall not be perceivable beyond the limits of the Facility (including the effluent storage ponds) and LAAs .
5. Following completion of Provision I.7, to ensure compliance with Discharge Specification E.4, 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 in any single pond 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 1 March 1991 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. All ponds 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.
7. Effluent storage ponds shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter. 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. The Discharger shall monitor residual solids accumulation in the effluent storage ponds annually and shall periodically remove residual solids as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the pond(s) threatens to impact the pond(s)

storage capacity, the Discharger shall clean out the pond(s) within 12 months after the date of the estimate.

9. 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. Unless a California registered civil engineer certifies (based on design, construction, and condition of operation and maintenance) that less freeboard is adequate, the operating freeboard shall never be less than two feet (measured vertically). 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 or other suitable measurement device with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
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. All pens, alleyways, and manure storage areas shall be graded to promote drainage into the wastewater collection system.
12. The animal confinement areas and manure and feed storage areas shall be designed and maintained to convey all water that comes into contact with animal waste to the wastewater collection system. In addition, the areas shall be graded to minimize standing water as of 72 hours after the last rainfall to limit infiltration of water into underlying soils.
13. On or about 1 October of each year, the available capacity in the effluent storage ponds shall at least equal the volume necessary to comply with Discharge Specifications E.7 and E.9
14. The Discharger shall regularly inspect the liner condition in the lined effluent storage pond(s). The Discharger shall maintain and repair the liner as necessary to ensure the integrity of the pond liner is maintained and leakage from the liner is minimized.
15. If leachate generated in the LCRS in the effluent storage ponds begins to exceed the Action Leakage Rate (ALR), the Discharger shall take actions to inspect and repair the primary liner system, if necessary. Based on the September 2011 Wastewater Storage Pond System Operation & Maintenance Plan, the ALR for the effluent storage ponds and LCRS is 3.18 gpm.

**F. Groundwater Limitations**

Discharges of waste shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or background quality, whichever is greater:

1. The Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity and nitrate.
2. 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).

**G. Land Application Area Specifications**

For the purpose of this Order, “land application areas” or “LAAs” refers to the discharge area described in the Findings.

1. Crops shall be grown on the LAAs. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize crop uptake.
2. The perimeter of the LAAs shall be graded to prevent ponding along public roads or other public areas and prevent runoff or overspray onto adjacent properties not owned or controlled by the Dischargers.
3. Wastewater from the Facility shall not be applied within:
  - a. 50 feet of a water supply well,
  - b. 50 feet of a surface water or surface water drainage course, or
  - c. 25 feet of a property line or public right-of-way unless the irrigation system is managed to prevent runoff or overspray, in which case a minimum setback of 5 feet shall be maintained.
4. Application of waste constituents shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading to the LAAs, including the nutritive value of organic and chemical fertilizers and of the wastewater, shall not exceed the annual crop demand.

5. Hydraulic loading of wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the percolation of wastewater and irrigation water below the root zone (i.e., deep percolation).
6. The BOD loading to the LAAs, calculated as a cycle average as determined by the methods described in the attached MRP, shall not exceed **100 pounds per acre per day (lbs/acre/day)**.
7. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.
8. The Discharger shall not discharge process wastewater to the LAAs when soils are saturated (e.g., during or immediately after significant precipitation events).
9. Wastewater shall be distributed uniformly on adequate acreage to preclude the creation of nuisance conditions.
10. Discharge of process wastewater to any land not equipped with a fully functional tailwater/runoff control system is prohibited.
11. The LAAs shall be managed to prevent breeding of mosquitoes. More specifically:
  - a. All applied irrigation water must infiltrate completely within 48 hours;
  - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and
  - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.
12. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.
13. As required by the MRP, LAAs shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop land application use immediately and implement corrective actions to ensure compliance with this Order.
14. No physical connection shall exist between wastewater piping and any domestic water supply well or irrigation well that does not have an air gap or reduced pressure principle device.



15. Irrigation pipelines shall be flushed with fresh water after wastewater application as often as needed to ensure continuous compliance with Discharge Specification E.4.

#### **H. Solids Disposal Specifications**

1. For the purpose of this Order, residual solids include the solid, semisolid, and sludge removed during the treatment process.
2. Residual solids shall be removed from screens, treatment systems, vaults, and ponds as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.
3. Any handling and storage of residual solids shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soil in a mass or concentration that will violate the groundwater limitations of this Order.
4. If removed from the Facility, residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, reuse, biofuel feedstock, or land disposal at facilities (i.e., landfills, composting facilities, or soil amendment sites operated in accordance with valid waste discharge requirements issued by a Regional Water Board) will satisfy this specification.
5. Any proposed change in solids used or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

#### **I. Provisions**

1. The Discharger shall comply with the separately issued **Monitoring and Reporting Program R5-2023-####**, 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 the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
3. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034 (and revised per Resolution R5-2020-0057)

incorporating new programs (Salt and Nitrate Control Program) for addressing ongoing salt and nitrate accumulation in the Central Valley developed as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative.

4. 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.
5. **By <6 months from adoption>**, the Discharger shall submit a ***Groundwater Monitoring Well Installation Work Plan*** that evaluates the adequacy of the current groundwater monitoring network and proposes a time schedule to install additional monitoring wells, as needed, to provide adequate coverage of its Facility and LAAs. Specifically, the work plan shall propose the necessary groundwater monitoring wells to ensure the network can adequately characterize upgradient and downgradient conditions around the southern LAAs (see Finding 47) and evaluate if additional monitoring wells are needed around the Facility. The Work Plan should propose to install the necessary groundwater monitoring wells to adequately characterize upgradient and downgradient groundwater conditions in the southern LAAs. The Work Plan shall be prepared in accordance with, and include the items listed in the first section of **Attachment E** (Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports) incorporated herein. The groundwater monitoring wells shall be designed to yield samples representative of the Shallow Zone<sup>3</sup> of the first aquifer underlying the ponds and LAAs.

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<sup>3</sup> The "Shallow Zone" is the portion of the aquifer whose areal extent is defined by the boundaries of the discharge area and whose vertical extent is defined by the depth of the shallowest 10% of the domestic water supply wells near the discharge or an equivalent alternative.

6. Within six months of the Executive Officer approval of the *Groundwater Monitoring Well Installation Work Plan* required per Provision I.5., the Discharger shall submit a **Groundwater Monitoring Well Installation Report** for all new groundwater monitoring wells constructed to comply with Provision I.5. The report shall be prepared in accordance with, and including the items listed in, the second section of **Attachment E** (Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports). The report shall describe the installation and development of all new monitoring wells and explain any deviation from the approved Work Plan.
7. By **<12 months from adoption>** the Discharger shall provide a **Pond Evaluation Report** that evaluates potential odor issues and dissolved oxygen (DO) levels within the settling and effluent storage ponds and assess whether aeration is needed to maintain DO levels in the ponds to comply with Discharge Specification E.5. The Report shall include a work plan to install an appropriate aeration system for the pond(s), if needed, with a time schedule not to exceed **<1 year from adoption>** to complete installation of the aeration system.
8. 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.
9. 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.
10. 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.

11. The Discharger shall use the best practicable control technique(s), including proper operation and maintenance, to comply with this Order.
12. As described in the 1 March 1991 SPRRs, 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.
13. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Act (42 U.S.C. section 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to SERC.
14. 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.
15. In the event of any change in control or ownership of the Facility or LAAs, 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.
16. To assume operation as Discharger under this Order, a succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of coverage under this Order. The request must contain the requesting party'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.

17. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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

### **ATTACHMENTS**

**ATTACHMENT A – List of Land Application Area Owners**

**ATTACHMENT B – Site Location Map**

**ATTACHMENT C – Facility Map**

**ATTACHMENT D – Process Flow Schematic**

**ATTACHMENT E – Requirements for Monitoring Well Installation Work Plans**

**Standard Provisions & Reporting Requirements**

**Information Sheet**

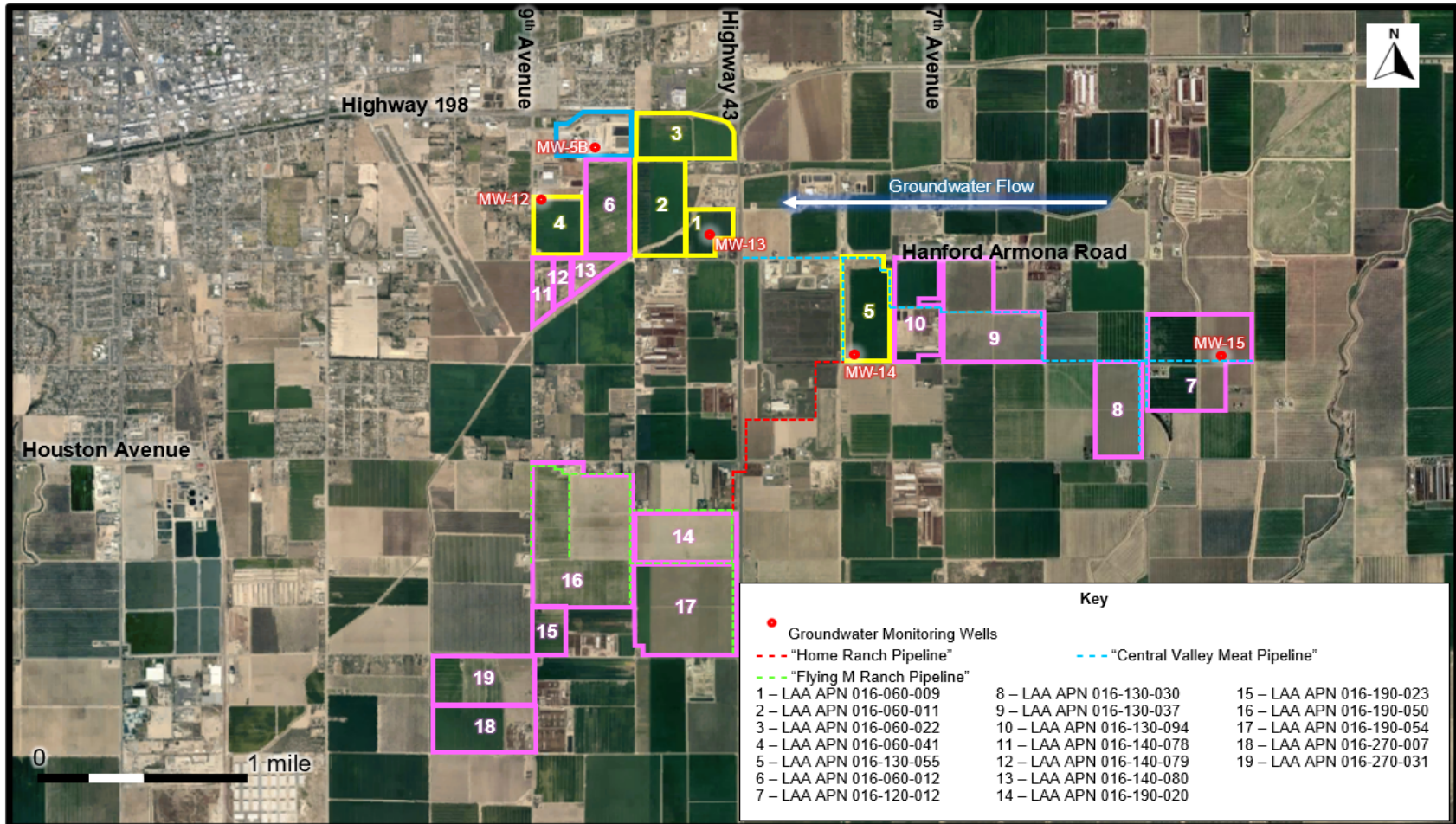
**Monitoring and Reporting Program R5-2023-####**

[Tentative] Waste Discharge Requirements Order R5-2023-####  
Central Valley Meat Company, Inc. et al.  
Hanford Beef Processing Facility  
Kings County

**ATTACHMENT A—List of Land Application Area Owners**

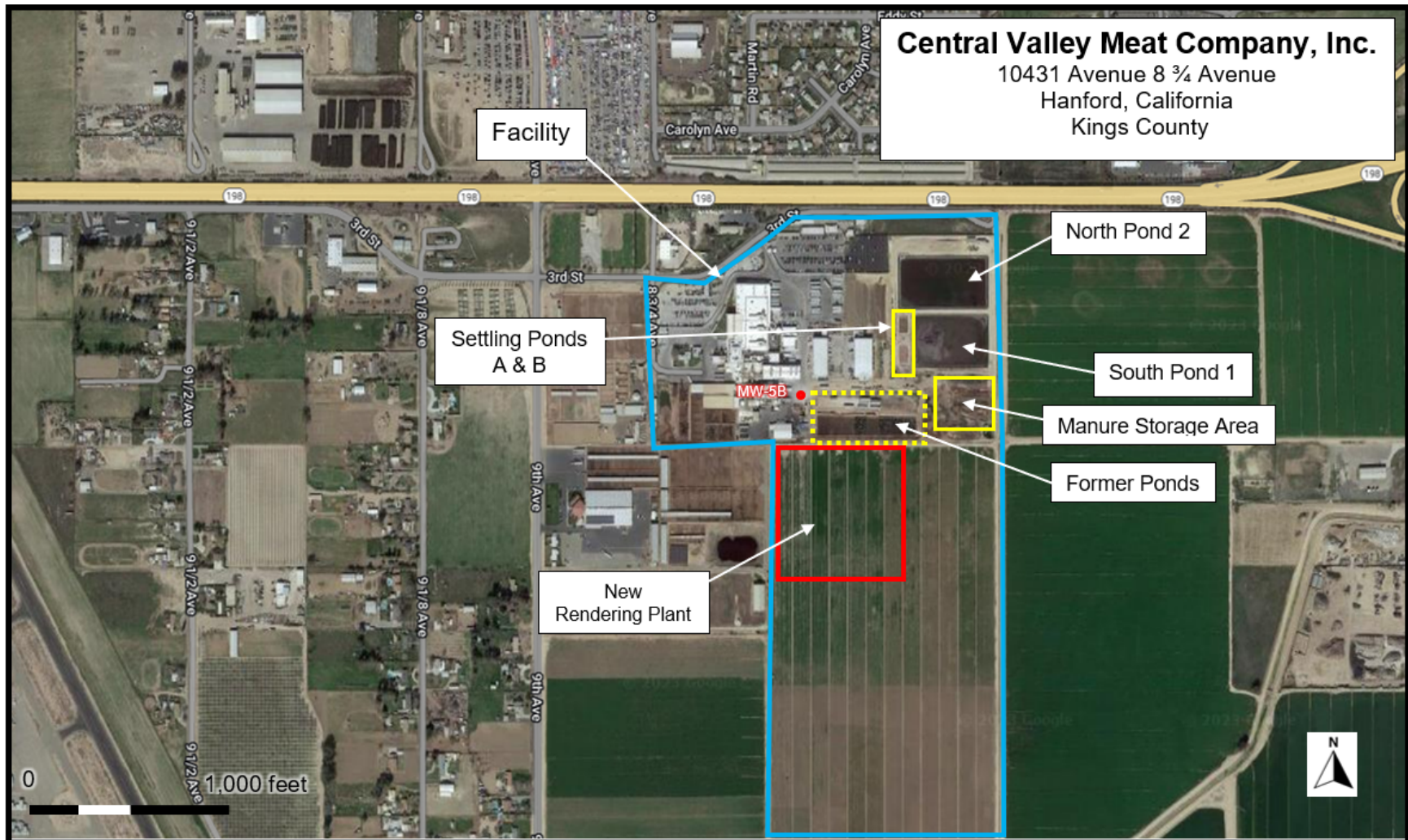
	<b>APN</b>	<b>Total Acreage</b>	<b>Net Farmable Acreage</b>	<b>Owner</b>	<b>Status</b>
1	016-060-009	33.68	28.90	Tri West Investments LLC	Permitted by R5-2008-0017
2	016-060-011	79.57	72.30	Tri West Investments LLC	Permitted by R5-2008-0017
3	016-060-022	70.31	66.50	Tri West Investments LLC	Permitted by R5-2008-0017
4	016-060-041	47.05	43.50	Lawrence & Shirley Coelho Revocable Trust	Permitted by R5-2008-0017
5	016-130-055	83.76	75.00	Tri West Investments LLC	Permitted by R5-2008-0017
6	016-060-012	78.48	32.00	Tri West Investments LLC	New LAA
7	016-120-012	134.28	122.80	John & Shanda Mello Living Trust	New LAA
8	016-130-030	74.98	71.00	John & Shanda Mello Living Trust	New LAA
9	016-130-037	123.00	76.40	John & Shanda Mello Living Trust	New LAA
10	016-130-094	77.22	35.30	Mello Chip & Kelly H/W	New LAA
11	016-140-078	24.50	23.00	Tri West Investments LLC	New LAA
12	016-140-079	10.10	10.00	Tri West Investments LLC	New LAA
13	016-140-080	18.30	15.50	Tri West Investments LLC	New LAA
14	016-190-020	78.68	75.40	Chip J. Mello/John & Shanda Mello Living Trust	New LAA
15	016-190-023	26.09	23.50	Douglas E. Martin	New LAA
16	016-190-050	227.46	210.80	John & Shanda Mello Living Trust	New LAA
17	016-190-054	157.56	153.40	Chip J. Mello/John & Shanda Mello Living Trust	New LAA
18	016-270-007	79.48	54.50	Douglas E. Martin	New LAA
19	016-270-031	78.62	77.10	Douglas E. Martin	New LAA
	<b>Total</b>	<b>1503.12</b>	<b>1266.90</b>		

**ATTACHMENT B—Site Location Map**

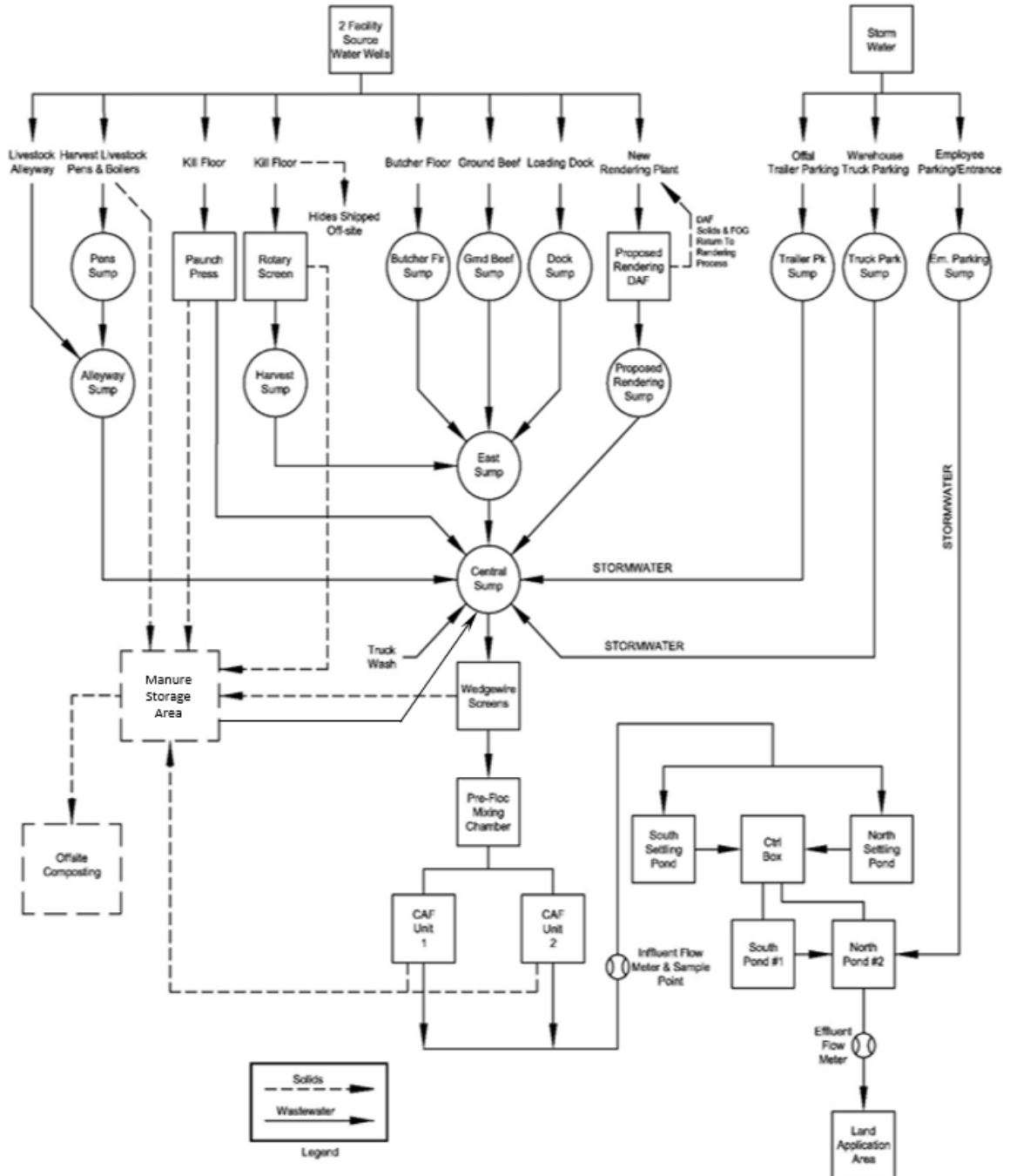




**ATTACHMENT C—Facility Map**



**ATTACHMENT D—Process Flow Schematic**



**ATTACHMENT E –  
Requirements for Monitoring Well  
Installation Work Plans and Installation Reports**

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2 below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

**SECTION 1 -Monitoring Well Installation Workplan and Groundwater Sampling  
and Analysis Plan**

The monitoring well installation workplan shall contain the following minimum information:

**A. General Information:**

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

**B. Drilling Details:**

- Description of the on-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

**C. Monitoring Well Design (in narrative and/or graphic form):**

- Diagram of proposed well construction details:
  - o Borehole diameter
  - o Casing and screen material, diameter, and centralizer spacing (if needed)

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- Type of well caps (bottom cap either screw on or secured with stainless steel screws)
- Anticipated depth of well, length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Anticipated screen slot size and filter pack

- **D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):**

- Method of development to be used (i.e., surge, bail, pump, etc.)
- Parameters to be monitored during development and record keeping technique
- Method of determining when development is complete
- Disposal of development water

- **E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):**

- Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
- Datum for survey measurements
- List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)

**F. Schedule for Completion of Work**

**G. Appendix: Groundwater Sampling and Analysis Plan (SAP)**

The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal

- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
  - o General sampling techniques
  - o Record keeping during sampling (include copies of record keeping logs to be used)
  - o QA/QC samples
- Chain of Custody
- Sample handling and transport

## **SECTION 2 - Monitoring Well Installation Report**

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

### **A. General Information:**

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells
- Number of monitoring wells installed and copies of County Well Construction Permits
- Topographic map showing facility location, roads, surface water bodies
- Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

### **B. Drilling Details (in narrative and/or graphic form):**

- On-site supervision of drilling and well installation activities
- Drilling contractor and driller's name
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals and logging methods
- Well boring log (including the following):
  - o Well boring number and date drilled
  - o Borehole diameter and total depth

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- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

**C. Well Construction Details (in narrative and/or graphic form).**

- Well construction diagram, including:
  - Monitoring well number and date constructed
  - Casing and screen material, diameter, and centralizer spacing (if needed)
  - Length of well casing, and length and position of perforated interval
  - Thickness, position and composition of surface seal, sanitary seal, and sand pack
  - Type of well caps (bottom cap either screw on or secured with stainless steel screws)

**D. Well Development:**

- Date(s) and method of development
- How well development completion was determined
- Volume of water purged from well and method of development water disposal
- Field notes from well development should be included in report

**E. Well Survey (survey the top rim of the well casing with the cap removed):**

- Identify the coordinate system and datum for survey measurements
- Describe the measuring points (i.e. ground surface, top of casing, etc.)
- Present the well survey report data in a table

Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

[Tentative] Waste Discharge Requirements Order R5-2023-####  
For

Central Valley Meat Company, Inc.; Lawrence and Shirley Coelho Revocable Trust;  
Tri West Investment LLC; John and Shanda Mello Living Trust;  
Mello Chip and Kelly H/W; Chip J. Mello; Chip J. Mello/John and Shanda Mello Living  
Trust; and Douglas E. Martin  
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**BACKGROUND**

Central Valley Meat Company, Inc. (hereafter Central Valley Meat or Discharger) operates the Hanford Beef Processing Facility (Facility) in Hanford, Kings County on land owned by Lawrence and Shirley Coelho Revocable Trust. Waste Discharge Requirements (WDRs) Order R5-2008-0017 authorizes a monthly average discharge flow of 0.39 million gallons per day (mgd) of process wastewater, with a flow increase up to 0.42 mgd upon written acceptance by the Central Valley Water Board Executive Officer of the signed use agreement for the use of process wastewater on parcel 016-130-058 (78 acres), for a total of 396 acres of land application areas (LAAs). However, the proposed addition of parcel 016-130-058 never occurred due to the High Speed Rail. Instead, the Discharger submitted a new RWD in 2015 to increase flows and further expand the LAAs.

Previous operations at the site, which included hide processing, resulted in elevated EC and chloride concentrations as high as 3,000  $\mu\text{mhos/cm}$  and 600 mg/L respectively, in shallow groundwater beneath the Facility. In addition, nitrate as nitrogen in groundwater downgradient of the ponds and original LAAs as high as 93 mg/L (MW-3 in 1997) exceeded the Maximum Contaminant Level (MCL) of 10 mg/L (Nitrate as N). Hide processing at the Facility ceased prior to 1986 and is not part of current operations. To address existing groundwater degradation from previous activities, WDRs Order R5-2008-0017 required the Discharger to complete improvements to the wastewater pond system including lining the ponds. In 2011 the Discharger completed the pond improvements. The new pond system installed in 2011 consists of two concrete lined settling ponds and two double lined effluent storage ponds. The effluent storage pond liner consists of a 60-mil HDPE primary liner with a 40-mil HDPE secondary liner. The double lined ponds are equipped with a leachate collection and removal system (LCRS) situated between the primary and secondary liner. In addition, there is a pan lysimeter situated below the secondary liner beneath the LCRS collection sump.

Central Valley Meat submitted a Report of Waste Discharge (RWD) on 29 October 2015 to increase flows and expand the LAAs. On 26 April 2016 a revised RWD with additional information regarding the application of process wastewater to the LAAs was submitted. Central Valley Meat submitted a second revised RWD on 8 September 2021, to expand

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operations at the Facility, specifically the addition of a new enclosed meat rendering plant (on APN 016-060-012) and associated infrastructure and treatment system improvements (installation of a dissolved air flotation unit to treat wastewater from the new rendering plant). The 2021 revised RWD also requested an annual flow limit increase to 365 million gallons (or 1.0 mgd annual average), further expansion of the LAAs (to 1,574 acres or 1,267 net farmable acres), and conveyance of the wastewater via two irrigation pipelines (“Home Ranch Pipeline” and “Flying M Ranch Pipeline”) in order to send wastewater to the new southern LAAs. The LAAs are owned by various owners and receive wastewater under a Water Use Agreement with Central Valley Meat. Central Valley Meat and the various landowners are collectively referred to as Discharger(s).

## **FACILITY AND DISCHARGE**

The Facility operates 6 to 7 days per week and can process between 1,600 and 2,000 cattle per day. Wastewater generated from various processes within the Facility include live cattle washing, kill floor, tripe processing, carcass washes, condensers, boning room, truck washes, plant sanitation, stormwater, and other processing activities. All wastewater is collected in drains and various sumps throughout the Facility and then to a central aerated collection sump (Central Sump). From the Central Sump the wastewater is treated and placed in one of two concrete-lined settling ponds. From the settling ponds wastewater is discharged to the two double-lined wastewater storage ponds before being sent to the various LAAs for irrigation of crops.

Solids (primarily manure) from the cattle pens and settling ponds are stockpiled in the manure storage area and hauled off-site to a permitted composting facility for disposal. The manure storage area consists of a compacted clay pad and is graded to direct stormwater runoff to the wastewater collection system. All cattle pens, alleyways and holding areas are paved with concrete and graded to drain all waste and stormwater runoff into the collection system.

Based on data from the last three years current flows average about 180 million gallons annually. The proposed flow limit of 365 million gallons annually would increase total flows by about 50 percent. However, the water balance prepared for the 2021 RWD shows that at 365 million gallons annually wastewater would account for less than 20 percent of the crop’s irrigation requirements with the additional LAAs acreage. Therefore, at the proposed flow limit wastewater applications would still not represent a significant component to the hydraulic load on the LAAs.

One of the proposed changes includes wastewater discharges from a new fully enclosed rendering plant (Construction completed in November 2022). The new rendering plant will provide services for the Facility as well as the Harris Ranch Beef Company in Selma and potentially other regional beef processing facilities (design capacity 10.5 million pounds per week). The rendering plant is fully enclosed and there are no outside storage of any raw or finished product. In addition, the building is



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equipped with air scrubbers and a negative pressure containment to reduce and control odors. Wastewater from the new rendering plant will be minimal and will come from wash down of equipment, air scrubbers, condensate, and water removed from meat and bone scraps during the cooking process. The discharge from the rendering plant will account for about 15 percent of the wastewater generated, and the remaining 85 percent will be from existing operations at the Facility. Wastewater from the rendering plant is pre-treated using a dissolved air flotation (DAF) unit located inside the building before being commingled with the other waste streams at the Central Sump.

Wastewater quality of proposed rendering wastewater after the DAF treatment unit and projected flow weighted effluent from the existing operations and the new rendering plant is discussed in Finding 25

The proposed LAAs will be cropped with a combination of alfalfa (887 acres) and double cropped corn/wheat silage (380 acres). The annual estimated nitrogen and salt loading rates are expected to be below the crop uptake rates for alfalfa and a corn/wheat double crop as shown in Finding 31.

**GROUNDWATER CONSIDERATIONS**

Groundwater conditions are discussed in Findings 37 through 48 of the Order.

Groundwater quality data for the area prior to 1968 is sparse. The Facility installed a groundwater monitoring well network starting in 1993. The monitoring well network consisted of eleven wells. Ten shallow groundwater monitoring wells (MW-2, MW-3, MW-4A, MW-5A, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11) and one deep monitoring well (MW-5B). By 2013 all of the shallow groundwater monitoring wells were dry. Prior to going dry, monitoring data from the shallow downgradient monitoring wells (MW-2, MW-3, MW-4A, MW-5A, MW-5B, MW-6, and MW-11) showed elevated EC and chloride concentrations, likely due to the former hide processing operations and overloading of the original LAA (not part of current operations). However, EC and chloride concentrations in these wells appeared to be decreasing while the wells could be sampled. Groundwater for these wells between 2000 and 2013 are presented below.

**Table 1 – Groundwater Monitoring Data for Shallow Monitoring Wells (2005-2013)**

Well ID	Location	EC (µmhos/cm)	Chloride (mg/L)	Nitrate (as N) (mg/L)
MW-2	Adjacent to former ponds	1,580 - 2,290	87 - 200	6 - 85
MW-3	Cross-gradient to former ponds	damaged	damaged	damaged
MW-4A	Downgradient of the former ponds	1,400 - 2,270	380 - 494	6.2 - 59
MW-5A	Downgradient of the former ponds	1,880 - 2,450	90 - 110	0.48 - 15.9

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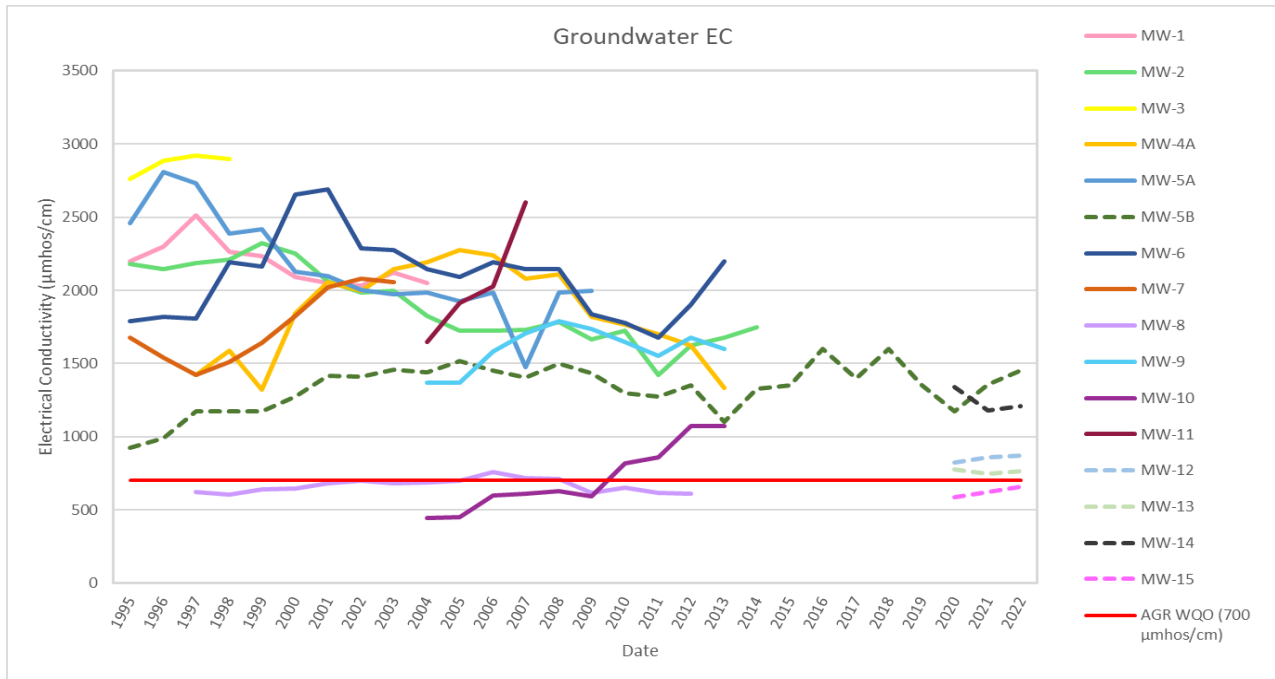
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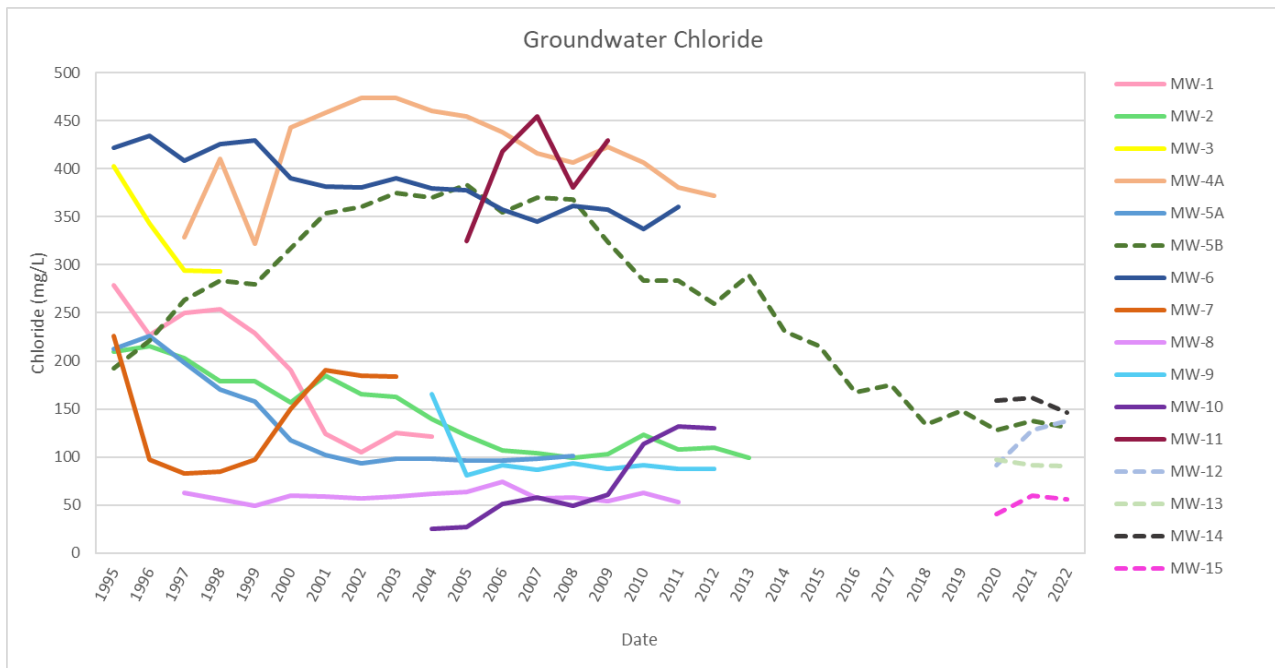
Well ID	Location	EC ( $\mu$ mhos/cm)	Chloride (mg/L)	Nitrate (as N) (mg/L)
MW-5B	Downgradient of the former ponds	1,200 - 1,630	284 - 412	<0.4-0.7
MW-6	Cross-gradient of former ponds	1,450 - 2,890	305 - 465	30 - 85
MW-7	Downgradient of former LAAs	1,800 - 2,090	120 - 200	61 - 85
MW-8	Background well	550 - 728	52 - 65	<0.4 - 2.1
MW-9	Downgradient of the LAAs	1,250 - 1,810	78 - 98	22 - 44
MW-10	Background well	390 - 1,200	16 - 130	4.3 -31
MW-11	Downgradient of the former ponds	1,060 - 2,600	179 - 479	2 - 33

In 2020, the Discharger installed four new groundwater monitoring wells at deeper depths due to decreasing water levels. Monitoring wells MW-12, MW-13, MW-14, and MW-15 were installed to depths ranging between 180 and 200 feet below ground surface (bgs).

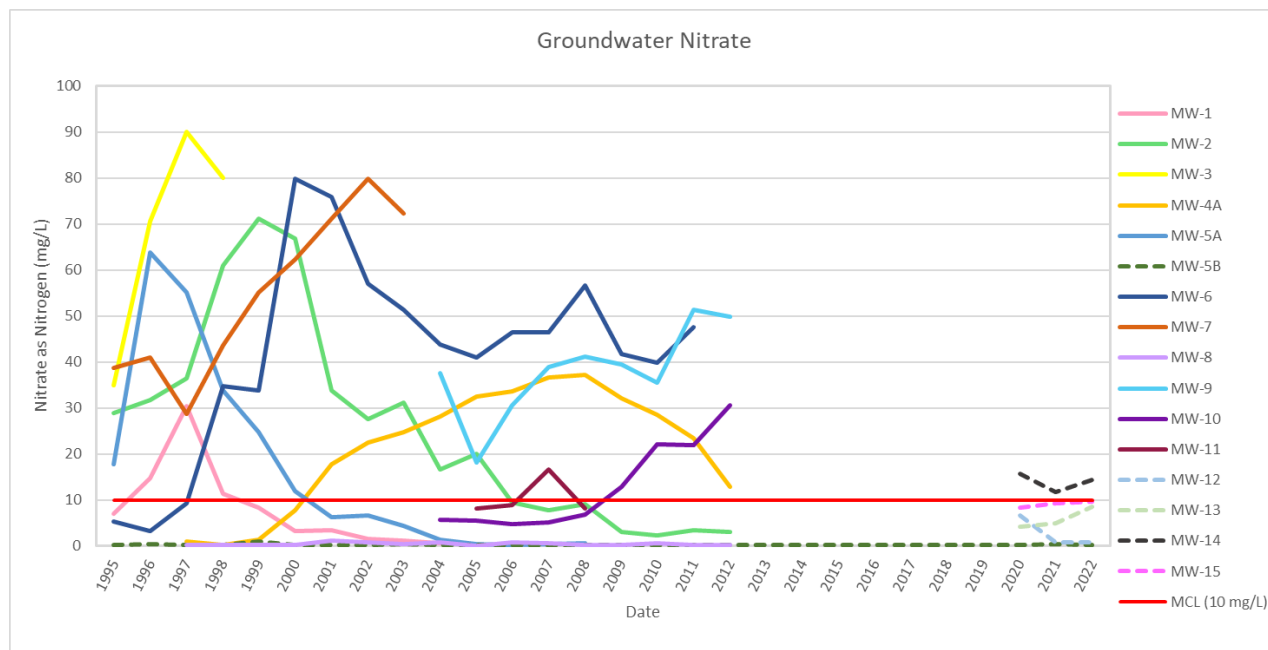
**Figures 1 through 3** show the groundwater trends for EC, chloride, and nitrate (as N) for the former shallow monitoring wells from 1995 until they went dry, MW-5B (existing deeper monitoring well), and the new deeper monitoring wells added in 2020 (MW-12, MW-13, MW-14, and MW-15). Shallow monitoring wells are depicted as solid lines and deeper monitoring wells including MW-5B are depicted as dashed lines. The graphs show relatively stable trends for EC and nitrate in MW-5B, while chloride concentrations in MW-5B have dropped significantly since about 2005.



**Figure 1 - Groundwater EC Trends**



**Figure 2 – Groundwater Chloride Trends**



**Figure 3 – Groundwater Nitrate Trends**

### ANTIDegradation

Antidegradation Analysis and conclusions are discussed in Findings 75 through 80 of the Order.

### DISCHARGE PROHIBITIONS, LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS

The proposed Order prohibits the discharge of waste to surface water and to surface water drainage courses. Effluent discharged to the LAAs shall not exceed a total annual discharge of 365 million gallons (monitored at EFF-001). This Order includes a cycle BOD loading limit of 100 lbs/acre/day and requires the application of wastewater to be at agronomic rates. The Order also establishes a performance-based salt limit requiring the Facility's cumulative discharge salt load (in FDS) to not exceed 2.0 million pounds per year. This is consistent with current loading rates to the LAAs and allows more flexibility for seasonal changes and water conservation efforts.

### 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 impact of waste discharges on water for the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate. This Order includes influent, effluent, solids, groundwater, and water supply monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications of the Order.

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### 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 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 with Resolution [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) ([https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/resolutions/r5-2020-0057\\_res.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf)).

For the Salt Control Program, dischargers that are unable to comply with the stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. On 5 January 2021, the Central Valley Water Board issued the Discharger (CV-SALTS ID: 2112) a Notice to Comply letter under the Salt Control Program. On 20 July 2021, the Discharger submitted a Salt Control Program Notice of Intent selecting to participate in the P&O Study.

For the Nitrate Control Program, dischargers unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers may comply with the new nitrate program either individually (Pathway A) or collectively with other dischargers (Pathway B). For the Nitrate Control Program, the discharge falls within Groundwater Sub-Basin 5-22.12 (San Joaquin Valley – Tulare Lake), a Priority 2 basin/sub-basin. Implementation within a Priority 2 basin/sub-basin will occur within two to four years after the effective date of the Nitrate Control Program. However, as an existing Facility proposing to increase nitrate contributions from expanded operations, the Discharger was required to comply with the Nitrate Control Program as part of the Report of Waste Discharge. On 20 July 2021, the Discharger submitted a Nitrate Control Program Notice of Intent and has elected to join the Kings Water Alliance Management Zone.

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](https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/) can be found at the following link: [https://www.waterboards.ca.gov/centralvalley/water\\_issues/salinity/](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

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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 actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.