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CENTRAL VALLEY REGION

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WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX



ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	TENTATIVE
Program:	Non-15
Region 5 Office:	Redding
Discharger(s):	Sierra Nevada Cheese Company, Inc. and Gregersen Properties, LLC
Facility:	Sierra Nevada Cheese Processing Facility
Address:	6505 County Road 39, Willows
County:	Glenn County
Parcel Nos.:	020-160-004-0, 020-160-006-0, 020-330-004-9
CIWQS Place ID:	214132
Prior Order(s):	R5-2007-0043

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 XX April 2024.

PATRICK PULUPA,
Executive Officer

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GLOSSARY

AMSL.....	Above Mean Sea Level
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 the Sacramento River Basin and the San Joaquin River Basin
bgs	Below Ground Surface
BPTC.....	Best Practicable Treatment and Control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq.
COC[s]	Constituent[s] of Concern
DO.....	Dissolved Oxygen
DWR.....	California Department of Water Resources
EC	Electrical Conductivity
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
µg/L.....	Micrograms per Liter
µmhos/cm.....	Micromhos per Centimeter
mg/L	Milligrams per Liter
MRP	Monitoring and Reporting Program
MW	Monitoring Well
MCL.....	Maximum Contaminant Level per Title 22
NCP.....	Nitrate Control Program
NPDES.....	National Pollutant Discharge Elimination System
ROWD.....	Report of Waste Discharge

WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX
SIERRA NEVADA CHEESE COMPANY
SIERRA NEVADA CHEESE PROCESSING FACILITY
GLENN COUNTY
GLOSSARY

SPRRs Standard Provisions and Reporting Requirements

TDS Total Dissolved Solids

Title 22 California Code of Regulations, Title 22

Title 23 California Code of Regulations, Title 23

Title 27 California Code of Regulations, Title 27

TKN Total Kjeldahl Nitrogen

USEPA United States Environmental Protection Agency

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. Sierra Nevada Cheese Company, Inc. and Gregersen Properties, LLC, (collectively, Discharger) owns and operates a cheese processing facility (Facility) located at 6505 County Road 39, approximately four miles north of Willows, Glenn County, Sections 15 and 22 of T20N, R3W, MDB&M. The Facility location is depicted on the Facility Location Map in **Attachment A**.
2. The Facility and discharge area is within Glenn County Assessor's Parcel Numbers (APNs) 020-160-004-0, 020-160-006-0, and 020-330-004-9. The parcels consist of approximately 129 acres and are owned by the Discharger.
3. As Facility owner and operator, the Discharger is responsible for compliance with the waste discharge requirements (WDRs) prescribed in this order.
4. The following materials are attached and incorporated as part of this Order:
 - a. Attachment A - Site Location Map
 - b. Attachment B - Facility Map
 - c. Attachment C - Groundwater Monitoring Results
 - d. Standard Provisions & Reporting Requirements dated 1 March 1991 (SPRRs).
 - e. Information Sheet.
5. Also attached is **Monitoring and Reporting Program R5-2024-XXXX** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs.
6. On 2 December 2021, the Discharger submitted a Report of Waste Discharge (ROWD) to update WDRs for an existing cheese processing facility that discharges treated process wastewater to three onsite treatment ponds.

Regulatory History

7. The Discharger purchased the Facility in 2003 from Dairy Farmers of America, who operated Glenn Milk Plant. The Glenn Milk Plant discharged up to 280,000 gallons per day (gpd) of cooling water to adjacent Walker Creek and up to 200,000 gpd of process water to three treatment ponds and four overflow ponds. Glenn Milk Plant operated under NPDES Order R5-2002-0161.

8. Previous WDRs Order R5-2007-0043 was adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) on 4 May 2007 to reflect changes to operations and discharge at the Facility. The Discharger converted the powdered milk plant to a small cheese production facility, which reduced the volume of the discharge and resultant organic loading to the treatment and overflow ponds, as well as ceased discharge to Walker Creek. The prior NPDES permit was rescinded.
9. The Central Valley Water Board adopted Cease and Desist Order R5-2015-0114 (CDO) on 2 October 2015 for the Discharger's failure to comply with WDRs, including bypass of untreated or partially treated wastewater, failure to report bypass, odors resulting from bypass, failure to maintain the dissolved oxygen concentration limit in the treatment ponds, and failure to comply with monitoring and reporting requirements in the MRP. The CDO prompted installation of four groundwater monitoring wells, removal of sludge from the treatment ponds, hauling whey wastewater off site, reconfiguration of the treatment ponds, and increasing the contact time for coagulation before solids removal in the suspended air flotation unit. The Discharger met all requirements of the CDO, which was rescinded on 6 April 2018 by Order R5-2018-0031.

Existing Facility and Discharge

10. The Facility currently processes approximately 400,000 gallons of milk monthly and produces cheese, yogurt, butter, and other cultured products five-days a week. The waste streams from this production include wastewater from cheese production, wash water, and boiler blowdown.
11. From 2017-2022, the Facility has discharged an average of approximately 46,900 gpd as shown in Table 1. The Discharger calculates the average daily wastewater flow using monthly totals obtained from a flow meter and dividing by the total number of days in each month.

Table 1 - Average Daily Flow

Year	Average Daily Flow (gpd)
2017	48,999
2018	46,580
2019	58,506
2020	45,774
2021	41,240
2022	40,496

12. Process wastewater and wash water commingle in a 600-gallon wet well where it is pumped through a screen and into three 10,000-gallon storage tanks that are arranged in series. From the storage tanks, water is treated with coagulant, metered through a serpentine line, and flows into a Heron Innovators Model F8 Suspended Air Emulsion Generator and Heron Innovators Model CF50 CleanFloater Rectangular Flotation Tank (SAF). Clarified effluent from the SAF is discharged into a series of three unlined aerated treatment ponds. Pond 1 has a capacity of 2.2 million gallons, Pond 2 has a capacity of 3.1 million gallons, and Pond 3 has a capacity of 10.8 million gallons. The wastewater treatment system from the influent wet well to discharge to Pond 1 is approximately one day.

The Facility has four overflow ponds on the north side of County Road 39, where excess wastewater can be discharged from Pond 3. The four unlined overflow ponds have a total capacity of approximately 183 million gallons. Treated process wastewater from Pond 3 can be pumped to Ponds 4 or 5 for additional capacity; discharge to Ponds 4 or 5 occurs during periods of high precipitation. From Pond 3 treated wastewater is pumped to a diversion manhole located between Ponds 4 and 5 and can be discharged to either Ponds 4 or 5, treated process water flows from the diversion manhole to the center of the Ponds 4 and 5. If Pond 5 reaches two-foot freeboard, treated process wastewater overflows through a pipe in the berm to Pond 6. If Pond 6 reaches two-foot freeboard, treated process wastewater overflow through a pipe in the berm to Pond 7.

The area and capacity of each pond is shown in the following table.

Table 2 - Pond Capacity

Pond	Pond Use	Area (acres)	Depth (feet)	Capacity with 2-foot freeboard (million gallons)
1	Treatment	0.97	7	2.2
2	Treatment	1.37	7	3.1
3	Treatment	4.16	8	10.8
4	Overflow	16.2	8	42.2
5	Overflow	14.4	8	37.5
6	Overflow	9.3	8	24.2
7	Overflow	30.9	8	80.6
Total		77.3		201

13. The solids streams at the Facility include residual solids from the screens, whey waste, and SAF solids. Residual solids from the screen are sent to the local landfill. Whey waste and SAF solids are discharged to a 5,500-gallon truck and transported three times daily to either North State Rendering, for use as anaerobic digester feed stock, or to Black Rock Cattle Company or Caseous Group, for use as animal feed. In November 2022, the discharger installed a reverse osmosis system to concentrate whey waste and SAF solids to reduce the amount of waste hauled off site. The RO permeate is reused for pre-rinse and wash water or discharged to Pond 1 and RO concentrate is hauled offsite to North State Rendering, Black Rock Cattle Company, or Caseous Group.
14. Boiler blowdown is manually discharged into Pond 1 twice daily for approximately eight seconds. Water softeners are used for boiler blowdown and clean in place water. Less than 1,200 pounds of salt are used per month.
15. The Facility is supplied with water from an onsite well which is approximately 200-feet deep. An additional supply well is located onsite and is held in reserve. Both supply wells are located immediately north of the facility. The Discharger performed constituent testing in September 2021 as part of the ROWD. Table 3 shows sampling results from this monitoring event.

Table 3 - Supply Well, September 2021

Constituent	Unit	Result
pH	SU	7.39
Electrical Conductivity	µmhos/cm	596
Nitrate as Nitrogen	mg/L	3.42
Total Kjeldahl Nitrogen	mg/L	0

16. The Facility performs monthly constituent monitoring of Pond 1, averages from 2017-2022 are shown in Table 4.

Table 4 - Pond 1 Constituent Monitoring 2017-2022

Constituent	Units	Average	Range	WQOs
Electrical Conductivity	µmhos/cm	3,406	1,560-5,710	900
Total Dissolved Solids	mg/L	1944	868-3,020	500
Fixed Dissolved Solids	mg/L	1701	679-2,730	-
pH	SU	8.5	7.0-10.4	6-8
Biochemical Oxygen Demand	mg/L	131	34-342	-
Total Kjeldahl Nitrogen	mg/L	26	3-41	-
Nitrate as Nitrogen	mg/L	0.05	0.02-0.26	10
Chloride	mg/L	724	180-1,210	250
Sulfate	mg/L	37	1.4-493	250

17. Previous WDRs required constituent monitoring at Pond 3, which does not represent the quality of the entire pond system. Constituent concentrations in the discharge from the treatment system into Pond 1 are higher than in subsequent Ponds 2 and 3, as seen in Table 5, which includes results from a 3 May 2023 sampling event. The attached MRP includes the addition of monthly constituent monitoring of Pond 1.

Table 5 - 3 May 2023 Sampling Results

Constituent	Units	Treatment Plant Influent	Pond-1 Influent	Pond-2 Influent	Pond-3 Influent	Pond-3 Effluent
Electrical Conductivity	µmhos/cm	2000	2100	2100	1800	1800
Total Dissolved Solids	mg/L	4100	1400	1300	1100	1000
Fixed Dissolved Solids	mg/L	1000	1000	940	840	860
Total Suspended Solids	mg/L	1400	32	28	11	13
Biochemical Oxygen Demand	mg/L	5500	360	170	45	61
Total Nitrogen	mg/L	130	32	37	13	21
Organic Nitrogen	mg/L	130	32	28	11	13
Total Kjeldahl Nitrogen	mg/L	130	32	37	13	15
Nitrate as Nitrogen	mg/L	3.5	ND	ND	ND	6
Nitrite as Nitrogen	mg/L	0.056	ND	ND	0.005	0.004
Ammonia as Nitrogen	mg/L	1.8	0.02	8.6	2.2	2.1
Total Phosphorus	mg/L	44	17	17	9.7	9.9
Ortho Phosphate	mg/L	39	9.9	3.6	4.5	4.5
Chloride	mg/L	230	390	360	310	310
Arsenic-Total	ug/L	ND	1.8	2.3	1.8	ND
Iron-Total	ug/L	180	370	4100	180	410

Constituent	Units	Treatment Plant Influent	Pond-1 Influent	Pond-2 Influent	Pond-3 Influent	Pond-3 Effluent
Manganese-Total	ug/L	ND	20	110	39	44
Arsenic-Dissolved	ug/L		1.8			
Iron-Dissolved	ug/L		150			
Manganese-Dissolved	ug/L		15			

18. Domestic wastewater is discharged to a septic tank/leach field located between the office and Pond 1.
19. In 2019 the Discharger constructed a building, adjacent to Pond 5 that consists of cold warehouse, retail store, and conference room. Domestic wastewater is discharged to a separate onsite leach field, there is no process waste stream from this building. Stormwater from the building and surrounding site are discharged to a portion of Pond 5. Additionally, the Discharger excavated material from Pond 5 for the new building site.

Site-Specific Conditions

Topography, Climate, and Land Use

20. Surface elevation at the site ranges from approximately 140 to 150 feet above mean sea level and slopes eastward.
21. The Facility is in a Mediterranean climate characterized by dry summers and wet winters; the rainy season is typically from November through April.
22. Average annual precipitation in the area is approximately 17.5 inches and the 100-year total annual precipitation is 32.46 inches, according to data from the Willows climate station which is approximately 7.5 miles southwest of the Facility. Average annual evaporation in the area is approximately 68 inches according to pan evaporation data from the Chico Experiment Stations. The annual evapotranspiration rate in the area is approximately 52.1 inches. Monthly evapotranspiration ranges from 1.05 inches in January to 7.93 inches in July as shown in the California Irrigation Management Information System's Orland Station.
23. Stormwater at the site is collected in several storm drain inlets and conveyed to Pond 1.

24. The Facility is located within the Colusa Trough Hydrologic Subarea (No. 520.21), as shown in hydrologic maps prepared by the Department of Water Resources (DWR). The nearest surface water drainage is Walker Creek that bisects the property and sits adjacent to the treatment ponds. Walker Creek is a tributary of Willow Creek, a tributary of Colusa Trough, which is a tributary of Colusa Basin Drain.
25. Land use in the surrounding area is predominantly agricultural. There are approximately 12 rural residences located within ½ mile of the Facility.
26. The Facility and three treatment ponds are outside of the Federal Emergency Management Agency (FEMA) flood maps. According to FEMA map number 06021C0610D, the four overflow ponds are located in FEMA flood Zone A, with a 1 percent annual chance of flooding.

Groundwater Conditions

27. The Facility is in the Stony Creek Fan of the Sacramento Valley Groundwater Basin (5-021.52), as depicted on interagency hydrologic maps prepared by DWR. The Stony Creek Fan is an unconfined aquifer system, consisting mainly of unconsolidated, unweathered gravel and sand, with areas of clay interspersed.
28. Soils underlying the Facility and four overflow ponds are classified primarily as Hillgate loam and Hillgate gravelly loam; these soils are well to moderately well drained, with low to very low permeability. Soils underlying the three treatment ponds is classified as Riverwash, which has very low runoff and high to very high permeability according to the United States Department of Agriculture Web Soil Survey.
29. The Facility had four groundwater monitoring wells when previous WDRs Order R5-2007-0043 was adopted. A monitoring well assessment performed on 2 June 2011 recommended abandonment of Monitoring Well MW-3 due to nearby agricultural practices impacting the well. Additionally, Monitoring Wells MW-1, MW-2, and MW-4 were reported as dry and unable to be sampled. Previous WDRs Order R5-2007-0043 indicated depth to water in the four monitoring wells as approximately 30 feet below ground surface. After April 2013 all monitoring wells were reported as dry, except for one sampling event of MW-1 and MW-4 in January 2014. The Facility Map, located in Attachment B shows that MW-1 is cross gradient to the treatment ponds, MW-2 and MW-3 are cross gradient to the overflow ponds, and MW-4 is upgradient of the treatment ponds. Table 6 shows averages from monitoring events between 2009-2014.

Table 6 - Groundwater Monitoring from 2009-2014 (averages)

Constituent	Unit	MW-1	MW-2	MW-3	MW-4
Electrical Conductivity	µmhos/cm	524	498	492	631
pH	SU	6.52	6.52	6.89	6.39
Total Dissolved Solids	mg/L	246	253	256	319
Fixed Dissolved Solids	mg/L	209	186	190	262
Nitrate as Nitrogen	mg/L	1.5	5.6	1.3	3.1
Total Kjeldahl Nitrogen	mg/L	4.6	0.2	6.8	1.5
Iron, Total	µg/L	42.2	16.4	17.4	36.0
Arsenic, Total	µg/L	2.3	0.6	2.4	1.93
Manganese, Total	µg/L	4.7	2.8	13.7	5.2

30. CDO R5-2015-0114 required installation of a new groundwater monitoring network; four groundwater monitoring wells, MW-1A, MW-5, MW-6, and MW-7. The monitoring wells were installed, and monitoring began in April 2016; Table 7 below shows the well log data.

Table 7 – Well Log Data

Monitoring Well	MW-1A Cross-gradient	MW-5 Downgradient	MW-6 Upgradient	MW-7 Downgradient
Top of Well Casing (Feet AMSL)	147.84	149.49	152.42	148.36
Ground Surface Elevation (Feet AMSL)	here145.34	147.07	149.76	148.36
Length of Screen (Feet)	20	30	20	30
Bottom of Screen (Feet AMSL)	52.34	69.07	67.76	75.36
Bottom of Boring (Feet AMSL)	52.34	64.07	66.76	75.36

31. According to the driller's logs, soils in the vicinity vary and consist of silty clay mixed with sand and gravel; moisture could be seen at 18-22 feet bgs in each

boring. From 2017-2022, the groundwater elevation in the four newer monitoring wells ranged from 82.31-125.07 feet AMSL, a depth to groundwater at approximately 20-76 feet bgs, and hydraulic gradients ranging between 0.0003-0.0020 feet/foot that generally flows towards the southwest.

32. The Discharger has been collecting groundwater data in the newer wells since 2016. Table 8 below lists the average monitoring results from 2017-2022. Attachment C lists additional information including minimum, maximum and numbers of data points.

Table 8 - Groundwater Monitoring from 2017-2022 (averages)

Constituent	Unit	MW-1A	MW-5	MW-6	MW-7	WQO
Electrical Conductivity	µmhos/cm	718	1052	723	746	900
pH	SU	7.48	7.19	7.36	7.20	6-8
Total Dissolved Solids	mg/L	409	596	411	451	500
Fixed Dissolved Solids	mg/L	300	454	314	329	-
Nitrate as Nitrogen	mg/L	7.17	9.86	2.16	9.53	10
Total Kjeldahl Nitrogen	mg/L	0.12	0.11	0.13	0.16	-
Chloride	mg/L	21	73	48	25	250
Sodium	mg/L	23.3	65.7	26.9	33.1	-
Sulfate	mg/L	24.9	27.7	32.4	28.1	250
Arsenic, Total	µg/L	1.1	1.0	0.73	1.47	10
Manganese, Total	µg/L	0.28	2.19	6.12	8.79	50
Iron, Total	µg/L	10.3	132.7	80.0	241.6	300

33. The average value of iron in MW-7 was obtained after removing two values deemed as outliers at 7,380 and 66,000 ug/L, which is not consistent with values generally seen in MW-7. If iron values were high due to reduced groundwater conditions, arsenic and manganese would also both be expected to be high, yet there are no elevated levels in the historical groundwater monitoring of arsenic and manganese.
34. Dissolved (or filtered) metals concentrations are used to determine compliance with water quality objectives (WQOs) for the protection of drinking water sources; the groundwater monitoring to date has been as total recoverable metals, which makes these values conservative. Given that the total recoverable metals concentration averages have not exceeded WQOs, it is also true that dissolved metals concentrations would not have exceeded WQOs either.
35. As can be seen in Attachment B - Facility Map, MW-1A is cross gradient of the treatment ponds, MW-5 is downgradient of treatment Ponds 2 and 3, MW-6 is downgradient of overflow Ponds 5-7, and MW-7 is downgradient the production and wastewater treatment facility.
36. Groundwater monitoring shows exceedances of WQOs for electrical conductivity (EC) in all monitoring wells; MW-5 shows the highest levels of EC. See Salt and Nitrate Control Programs findings below.
37. Although the average concentrations of nitrate are below the WQO, some individual groundwater monitoring results show exceedances of the primary Maximum Contaminant Level (MCL) for Nitrate as N in downgradient monitoring wells MW-5 and MW-7.
38. MW-6 may not always represent background water quality as it sits adjacent to both Walker Creek and treatment Pond 3. MW-6 may be influenced due to pond mounding and flows from Walker Creek, which can either be losing to the ponds or gaining from the ponds depending on the level of the creek as it relates to the surface elevations of the ponds.

Regional Groundwater Conditions

39. DWR has available groundwater quality data from a well located approximately one mile northwest of the Facility, Table 9 shows results from a sampling event performed on 9 August 2006.

Table 9 - Regional Groundwater Characterization

Constituent	Unit	Offsite DWR Well
DWR Well ID	-	20N03W16E001M
Depth of Screened Interval	feet below ground surface	Unknown
pH	standard units	7.8
Electrical Conductivity	micromhos per centimeter	471
Turbidity	nephelometric turbidity units	0.19
Total Alkalinity	milligrams per liter as calcium carbonate	213
Dissolved Chloride	milligrams per liter	13

Table Note: Link to [regional water quality data](https://wdl.water.ca.gov/WaterDataLibrary/WaterQualityDataLib.aspx?StationNumber=20N03W16E002M&MapStationName=20N03W16E002M)
 (https://wdl.water.ca.gov/WaterDataLibrary/WaterQualityDataLib.aspx?StationNumber=20N03W16E002M&MapStationName=20N03W16E002M)

Statutory Authority

40. 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.

41. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.
42. 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).)
43. This Order and its associated Monitoring and Reporting Program (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.

44. 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

45. 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

46. This Order implements the Central Valley Water Board’s Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes WQOs necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.)
47. The designated beneficial use of water in the Colusa Basin Drain are agricultural supply; water contact recreation; warm and cold (potential) freshwater habitat; migration of warm water aquatic organisms; spawning, reproduction and/or early development of warm water aquatic organisms; and wildlife habitat.
48. The designated beneficial uses of underlying groundwater are municipal and domestic supply (MUN), agricultural supply, industrial service supply, and industrial process supply.

Water Quality Objectives

49. The Basin Plan establishes narrative WQOs for chemical constituents, taste and odors, and toxicity in groundwater. The toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.

50. The Basin Plan's narrative WQOs for chemical constituents require MUN designated water to at least meet the MCLs specified in California Code of Regulations title 22 (Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
51. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations to implement the narrative objective.
52. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality of Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an electrical conductivity (EC) of less than 700 $\mu\text{mhos/cm}$. There is, however, an eight-to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000 $\mu\text{mhos/cm}$, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Salt and Nitrate Control Programs

53. On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating the Salt Control Program and Nitrate Control Program. The State Water Resources Control Board (State Water Board) conditionally approved the amendments on 16 October 2019 (State Water Board Resolution 2019-0057). The effective date of the Basin Plan amendments was 17 January 2020 (Office of Administrative Law (OAL) Matter No. 2019-1203-03). For those components subject to United States Environmental Protection Agency (USEPA) approval, the effective date was 2 November 2020. On 10 December 2020, the Central Valley Water Board adopted revisions to the Basin Plan amendments (Resolution R5-2020-0057). The State Water Board conditionally approved these revisions on 1 June 2021 (State Water Board Resolution 2021-0019). The effective date of the revisions to the Basin Plan amendments was 10 November 2021 (OAL Matter No. 2021-0929-05S). The overarching goals and priorities of these programs are to (1) ensure safe drinking water supply; (2) reduce salt and nitrate loading so that ongoing discharges neither threaten to degrade high quality waters absent findings by the

Central Valley Water Board nor cause or contribute to exceedances of WQOs; and (3) implement long-term, managed restoration of impaired water bodies.

54. For the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will instead need to participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study), which is intended to develop a long-term salinity strategy for the Central Valley, and to implement reasonable, feasible, and practicable efforts to control salinity through performance-based measures determined the Central Valley Water Board. The Discharger (**CV-SALTS ID 1890**) was issued a Notice to Comply with the Salt Control Program on 5 January 2021. On 1 April 2021, the Discharger paid the fee to join the P&O Study. This Order requires the Discharger to continue efforts to control salinity in its discharge to the extent reasonable, feasible, and practicable and sets a performance-based effluent limit for EC of 125 percent of the measured annual average concentration. (See Requirement D, Effluent Limitations.)
55. For the Nitrate Control Program (NCP), dischargers proposing new or expanded discharges of nitrate to any groundwater basin/sub-basin, regardless of priority, generally must comply with the Nitrate Control Program, including the Conditional Prohibition of Nitrate Discharges to Groundwater. The Executive Officer retains the discretion to issue time schedules extending the due dates for compliance with the NCP, including submission of preliminary NCP submittals, where appropriate. This order contains a time schedule (i.e., a compliance schedule) (see Provision H.2) for the Discharger to begin implementation of the NCP by submitting an Initial Assessment, an Early Action Plan (as needed), and an Alternative Compliance Project(s) by the prescribed deadlines. Issuance of this time schedule is appropriate because the discharge of waste regulated by this order is to a non-prioritized basin/sub-basin for which notices to comply have not been issued and a management zone(s) does not yet exist. Furthermore, this order authorizes an already-existing discharge that, based on past monitoring data, has had limited impact on beneficial uses or sensitive receptors.

Compliance with Antidegradation Policy

56. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of “high quality waters” unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through WDRs requiring implementation of the best practicable treatment or control 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 (BPTC).

57. The Discharger has been consistently monitoring groundwater quality at the site since 2016. Determination of compliance with Resolution 68-16 is based on comparisons to background water quality.
58. Constituents of concern (COCs) that could have the potential to degrade groundwater include salts (EC and TDS), Chloride, Nitrate as nitrogen, and organics. MW-6 in Table 9 is used as background water quality. MW-5 and MW-7 are used in Table 9 as downgradient water quality. Table 10 summarizes relevant water quality data for these COCs from 2017-2022. Attachment C lists additional information including minimum, maximum, and numbers of data points.

Table 10 - Constituents with Potential for Degradation (averages)

Constituent	Units	Pond 1 Averages	MW-5 (Downgradient)	MW-6 (Upgradient)	MW-7 (Downgradient)	Water Quality Objectives
Electrical Conductivity	µmhos /cm	3,406	1052	723	747	900
Total Dissolved Solids	mg/L	1944	596	411	451	500
Fixed Dissolved Solids	mg/L	1701	454	314	329	-
Chloride	mg/L	724	72	48	26	250
Nitrate as N	mg/L	0.05	9.86	2.16	9.53	10

Salinity (EC, TDS, FDS). The Facility’s high-strength saline wastewater appears to degrade underlying groundwater for salinity constituents.

Chloride. The Facility’s wastewater threatens to degrade underlying groundwater quality with regard to chloride. The Facility discharges an average concentration above the recommended secondary MCL of 250 milligrams per liter (mg/L) (Title 22, § 64449). Downgradient MW-7 does not show an increase in concentration compared to background, however downgradient MW-5 does show an increase in concentration compared to background. The discharge does not appear to be causing an exceedance of the WQO for Chloride in groundwater.

Nitrate. Discharge of wastewater from the Facility has caused degradation of groundwater quality with respect to nitrate, with concentrations of Nitrate as Nitrogen (N) intermittently exceeding the WQO of 10 mg/L (Title 22, § 64431) in both downgradient monitoring wells.

Organics: The Facility discharges five-day BOD at an average concentration of 122.3 mg/L; however, past groundwater monitoring shows that the five-day BOD concentrations have been below the reporting limit of 3 mg/L in all monitoring events, which indicates that there is some conversion of organics as wastewater percolates through the vadose zone. Provision H.1.b specifies requirements that the Discharger to maintain BMPs to continue to reduce organics in the wastewater.

59. The requirements of this Order will result in the BPTC for the COCs described above. To minimize degradation by all COCs, this Order requires monitoring of effluent and groundwater and prescribes limits on effluent flows and constituent concentrations in groundwater. To minimize salinity- and chloride-related degradation, this Order requires compliance with the Salt Control Program (Discharger has chosen to participate in the P&O Study) and includes a performance-based effluent limit for salinity. To minimize nitrate-related degradation, this Order requires compliance with the Nitrate Control Program (in accordance with the Provision H.2 compliance schedule) and prohibits exceedances of the WQOs for Nitrate as Nitrogen and Total Nitrogen in groundwater.
560. The Facility contributes to the economic prosperity of the region by providing a necessary service and employment for the local community, incomes for numerous aligned businesses, and a tax base for local and county governments. Sierra Nevada Cheese Company employs approximately 130 people. 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.
61. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

62. The issuance of this Order, which prescribes requirements and monitoring of waste discharges at an existing facility, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California Environmental Quality Act (CEQA) (Pub. Res. Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, section 15301.
63. To the extent that the construction of any new basins, ponds, and/or surface impoundments are authorized under this Order, such features involve minor

alterations to land, authorization of which is exempt from CEQA pursuant to California Code of Regulations, title 14, section 15304.

Other Regulatory Considerations

Water Code Section 13149.2

64. These WDRs regulate a facility that may impact a disadvantaged community 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 will implement tasks to comply with 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 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.

Human Right to Water

65. Pursuant to Water Code, section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt, or establish a policy, regulation, or grant criterion (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet MCLs for drinking water (excluding salinity), which are designed to protect human health and ensure that water is safe for domestic use. For salinity, this Order requires compliance with the Salt Control Plan Program, which is consistent with the Human Right to Water Policy because its overarching 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

66. 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

67. 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

68. This Order does not cover stormwater or other discharges that are subject to the Clean Water Act’s NPDES. All stormwater is discharged to Pond 1 and retained on site; therefore, the Facility is not subject to stormwater permitting coverage.

Scope of Order

69. This Order is strictly limited in scope to those waste discharges, activities, and processes described and expressly authorized herein.
70. Pursuant to Water Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume, and/or timing of waste discharges authorized herein, without filing a new Report of Waste Discharge (ROWD) per Water Code section 13260.
71. Failure to file a new ROWD before initiating material changes to the character, volume, or timing of discharges authorized herein shall constitute an independent violation of these WDRs.
72. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as “Discharger,” subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

73. 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.

74. 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.)
75. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
76. 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 R5-2007-0043 is rescinded (except for enforcement purposes); and that the Discharger and their agents, employees and successors shall comply with the following.

A. Standard Provisions

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

B. Discharge Prohibitions

1. Waste classified as "hazardous" (per Cal. Code Regs., tit. 22, § 66261.1 et seq.), shall not be discharged at the Facility under any circumstance.
2. Waste constituents shall not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in:
 - a. Violations of the Groundwater Limitations of this Order; or
 - b. Conditions of "nuisance" or "pollution," as defined per Water Code section 13050.
3. Discharges of waste at a location or in a manner other than as described in the Findings and authorized herein is prohibited.
4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by SPRRs, Standard Provision E.2.
5. The discharge of industrial wastewater to the septic systems is prohibited.

C. Flow Limitation

1. Treatment plant effluent flows to Pond 1 shall not exceed a maximum daily flow limit of 60,000 gallons per day.

D. Effluent Limitations

1. To Comply with the Salt Control Program, the Discharger has selected the Alternative Salinity Permitting Approach (i.e., participation in the P&O Study), therefore, as discussed in Finding 52, these WDRs establish a performance-based effluent limitation for electrical conductivity (see Table 11).

Table 11 - Effluent Limitations (Pond 1)

Constituent/Parameter	Limit	Basis for Compliance Determination
Electrical Conductivity (EC)	4,400 μ mhos/cm	Annual Average

E. Discharge Specifications

1. Only fully treated process wastewater from Pond 3 shall be discharged to overflow Ponds 4-7.
2. The discharge shall remain within the permitted waste treatment/containment structures.
2. The Discharger shall operate all systems and equipment to maintain compliance with WDRs.
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 property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
5. As a means of ensuring compliance with Discharge Specification E.4, the dissolved oxygen (DO) content in the upper one foot of all ponds shall not be less than 1.0 mg/L at all times.
6. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in

any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to determine compliance with this requirement, the Discharger shall install and maintain in Pond 3 a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard. Ponds 1, 2, and 3 are hydraulically connected with Pond 3 having the lowest berm elevation. If the Pond 3 staff gauge is not also representative of the water level elevations in Ponds 1 and 2, then staff gauges shall similarly be installed in those ponds as well.

7. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
8. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.6 and E.7.
9. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
 - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
10. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

11. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.
12. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years upon adoption of this Order and shall periodically remove sludge as necessary to maintain adequate treatment and storage capacity.
13. Storage of residual solids in areas not equipped with means to prevent storm water infiltration is prohibited.

F. Groundwater Limitations

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

1. Constituent concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity.
2. Taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect any beneficial use.

G Solids Disposal Specifications

1. For the purpose of this Order, residual solids include the solid, semisolid, and liquid organic matter removed during the screening of wastewater.
2. Residual solids shall be removed from screens, 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 soils in a mass or concentration that will violate the groundwater limitations of this Order.
4. If removed from the site, residual solids shall be disposed of in a manner approved by the Central Valley Water Board and consistent with Title 27, division 2. Removal for reuse as animal feed, biofuel feedstock, or land disposal at facilities (i.e., landfills, composting facilities, 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 use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

H. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision H.6:
 - a. In the event that overflow ponds 4, 5, 6, and 7 are in regular use, which is considered as used in three or more quarters within a two-year period, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan within **6-months** that proposes a time schedule for installation of an upgradient monitoring well. The well shall be located and constructed to yield samples representative of first groundwater encountered that is upgradient to the overflow ponds and not influenced by pond mounding. The Monitoring Well Installation Workplan shall be prepared in accordance with and include the items listed in Attachment D, *Requirements for Monitoring Well installation Workplans and Monitoring Well installation Reports*.

Within **9-months** of Central Valley Water Board approval of the proposed Groundwater Monitoring Well Installation Work Plan, the Discharger shall submit a Groundwater Monitoring Well Installation report for the new groundwater monitoring well installed. The Monitoring Well Installation Workplan shall be prepared in accordance with and include the items listed in Attachment D, *Requirements for Monitoring Well installation Workplans and Monitoring Well installation Reports*. The report shall describe the installation and development of the new monitoring well and explain any deviation from the approved Work Plan.
 - b. Within **6-months** of the adoption of this order, the Discharger shall submit an engineering certification that indicates that the berms that contain Ponds 4, 5, 6, and 7 are sufficient to prevent inundation or washout from floods with a 100-year return frequency. Discharge into the overflow ponds shall only occur once the Discharger satisfies this provision. Once the Discharger has performed a survey of the berms, a calculation must be performed to establish pond invert elevation of all treatment and overflow ponds and shall be submitted with the engineering certification.
2. Compliance Schedule for Nitrate Control Plan Implementation. As described in Finding 53, the Discharger must implement the following tasks within the specified time limits to maintain compliance with the

requirements of the Nitrate Control Program. Failure to timely meet the requirements of this compliance schedule may subject the Discharger to the Conditional Prohibition of Nitrate Discharges to Groundwater until compliance is restored.

<p>a. Submit report evaluating potential impact on sensitive receptors in the area (i.e., drinking water wells)</p>	<p>Within 2 months after effective date of this Order.</p>
<p>b. If the sensitive receptor survey determines that the Discharger is causing any public water supply or domestic well to exceed the nitrate water quality objective, submit and implement an Early Action Plan (EAP).</p>	<p>Within 2 months after completion of the sensitive receptor survey.</p>
<p>c. Submit Proposed Alternative Compliance Project(s) Report including, at a minimum, (1) identification of public water supply and domestic wells that exceed the nitrate WQO and are within the discharge area of contribution (may be satisfied by sensitive receptor survey); (2) a schedule, with identified milestones, for addressing those nitrate-related drinking water issues (may be satisfied by EAP); and (3) identification of steps to be taken to meet the three goals of the Nitrate Control Program,¹ which may be phased over time.</p>	<p>Within 1 year after effective date of this Order</p>

3. The Discharger shall comply with the separately issued MRP R5-2024-XXXX, 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.
4. A copy of this Order (including Information Sheet, Attachments, and SPRRs) and the MRP shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with their contents.
5. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034, and revised in Resolution R5-2020-0057, incorporating the Salt and Nitrate Control Programs for addressing

¹ The three goals are (1) safe drinking water supplies, (2) balanced nitrate loadings, and (3) managed aquifer restoration.

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.

6. 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.
7. 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.
8. 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.
9. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
10. As described in the SPRRs, the Discharger shall report promptly to the Central Valley Water Board any material changes or proposed change in the character, location, or volume of the discharge.

11. In the event of any change in control or ownership of the Facility, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
12. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement in accordance with the signatory paragraph of Standard Provision B.3 that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

ENFORCEMENT

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

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of [the law and regulations applicable to filing petitions](#) are available on the Internet (at the address below) and will be provided upon request.
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

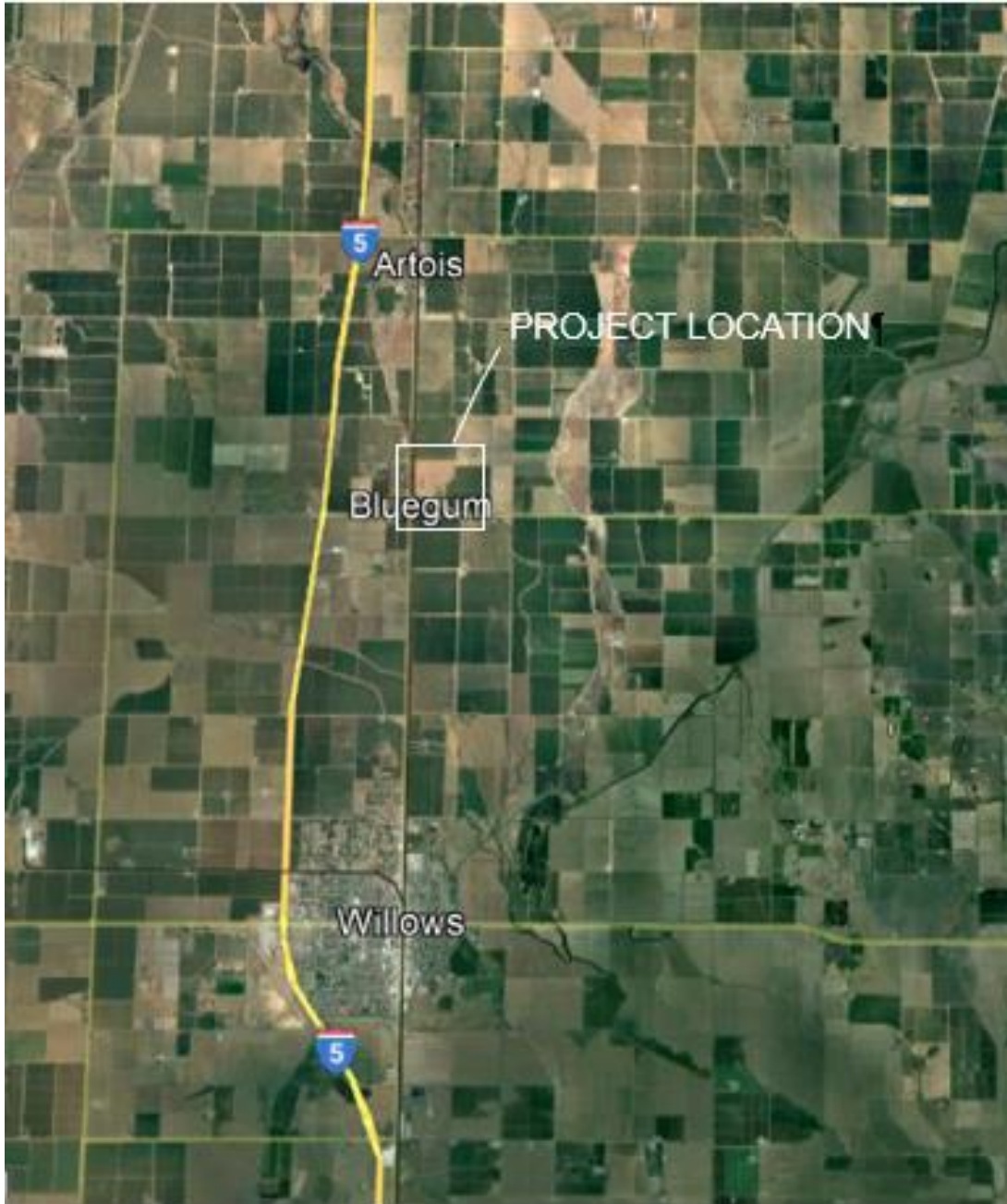
WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX
SIERRA NEVADA CHEESE COMPANY
SIERRA NEVADA CHEESE PROCESSING FACILITY
GLENN COUNTY

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ATTACHMENTS

ATTACHMENT A - SITE LOCATION MAP
ATTACHMENT B - FACILITY MAP
ATTACHMENT C - GROUNDWATER MONITORING
STANDARD PROVISIONS & REPORTING REQUIREMENTS
INFORMATION SHEET
MONITORING AND REPORTING PROGRAM R5-2024-XXXX

ATTACHMENT A - SITE LOCATION MAP



ATTACHMENT B - FACILITY MAP



WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX
 SIERRA NEVADA CHEESE COMPANY
 SIERRA NEVADA CHEESE PROCESSING FACILITY
 GLENN COUNTY
ATTACHMENT C

ATTACHMENT C - GROUNDWATER MONITORING RESULTS 2017-2021

Constituent	MW-1A				MW-5				MW-6				MW-7				WQO
	Min	Max	Avg	Count	Min	Max	Avg	Count	Min	Max	Ave	Count	Min	Max	Avg	Count	
Electrical Conductivity (µmhos/cm)	627	786	718	24	746	1240	1052	24	591	1139	723	24	652	811	746	21	700
pH (SU)	7.04	8	7.5	24	6.63	7.7	7.2	24	7	8	7.4	24	6.84	7.8	7.2	21	6-8
Total Dissolved Solids	345	466	409	24	493	688	596	24	332	626	411	24	398	606	451	20	500
Fixed Dissolved Solids (mg/L)	267	324	300	24	343	548	454	24	228	478	314	24	276	470	329	20	-
Nitrate as Nitrogen (mg/L)	1.8	11.6	7.2	24	7.4	12.1	9.9	24	0.42	8.3	2.2	24	6.6	10.9	9.5	20	10
Total Kjeldahl Nitrogen	0.09	0.2	0.1	22	0.09	0.2	0.1	22	0.09	0.2	0.1	22	0.09	0.9	0.2	20	-
Chloride (mg/L)	16.6	26.6	20.6	24	26.8	120	73.7	24	22	248.8	47.8	24	11.9	158	24.9	20	250
Sodium (mg/L)	22.1	25.9	23.3	24	51.9	76.5	65.7	24	22.2	42.3	26.9	24	7.2	37.1	33.1	20	-
Sulfate (mg/L)	19.9	27.1	24.9	24	24.6	31.3	27.7	24	26.1	57.7	32.4	24	26.7	30.7	28.1	20	250
Arsenic, Total (µg/L)	0.97	1.3	1.1	24	0.7	1.2	0.9	24	0.6	0.9	0.7	24	0.6	13.8	1.5	20	10
Manganese, Total (µg/L)	0.1	1.2	0.3	18	0.17	14.2	2.2	24	0.45	54.2	6.1	24	0.16	96.1	8.8	18	50
Iron, Total (µg/L)	2	34	10.3	22	8.6	1210	132.7	24	2	952	80	24	3	66000	3886.4	20	300

Values for iron that were deemed outliers and not included in Table 7 are included in the above table.

**ATTACHMENT D – REQUIREMENTS FOR MONITORING WELL INSTALLATION
WORKPLANS AND MONITORING WELL 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:

- 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

- Borehole diameter
- Casing and screen material, diameter, and centralizer spacing (if needed)
- 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.)
- Schedule for Completion of Work

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
- General sampling techniques
- Record keeping during sampling (include copies of record keeping logs to be used)
- 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
- Well boring number and date drilled
- Borehole diameter and total depth
- 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.

WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX
SIERRA NEVADA CHEESE COMPANY
SIERRA NEVADA CHEESE PROCESSING FACILITY
GLENN COUNTY
INFORMATION SHEET

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2024-XXXX
FOR
SIERRA NEVADA CHEESE COMPANY
SIERRA NEVADA CHEESE PROCESSING FACILITY
GLENN COUNTY

INFORMATION SHEET

BACKGROUND

Sierra Nevada Cheese Company, Inc. and Gregersen Properties, LLC (collectively, Discharger) owns and operates a cheese production facility (Facility) located approximately four miles north of Willows, Glenn County (Figure 1). From 2017-2021 the Facility treated and discharged approximately 48,500 gpd to three treatment and four overflow ponds.

Wastewater from the Facility is from the production of cheese, yogurt, butter, and other cultured products. The waste streams include wastewater from cheese production, wash water, and boiler blowdown.

In 2015, the Discharger was issued a Cease and Desist Order (CDO) for discharging untreated or partially treated whey wastewater into the Facility's overflow ponds. The CDO prompted installation of four groundwater monitoring wells, removal of sludge from the treatment ponds, hauling whey wastewater off site, reconfiguration of the treatment ponds, and increasing the contact time for coagulant before solids removal in the suspended air flotation unit.

Surface water drains to nearby Walker Creek, which is a tributary of Willow Creek, that discharges to the Colusa Basin Drain, and subsequent Sacramento River. Stormwater on the site discharges to storm drain inlets where it is conveyed to Pond 1.

Soils underlying the Facility and four overflow ponds are classified primarily as Hillgate loam and Hillgate gravelly loam, these soils are well to moderately well drained, with low to very low permeability. Soils underlying the three treatment ponds is classified as Riverwash, which has very low runoff and high to very high permeability according to the United States Department of Agriculture Web Soil Survey.

Domestic wastewater from the Facility is discharged to an onsite septic tank/leach field.

WASTEWATER TREATMENT AND DISPOSAL

Wastewater and wash water commingle in a wet well where it is pumped through a screen and into two storage tanks. From the storage tanks water is treated with coagulant, metered through a serpentine line, and into a suspended air flotation (SAF) unit. Effluent from the SAF unit discharges to a series of three unlined aerated treatment ponds. The Facility has four overflow ponds on the north side of County Road 39.

Previously, whey wastewater and solids from the SAF were discharged to a 5,500-gallon truck and transported three times daily to North State Rendering or Black Rock Cattle Company at Hillside in Orland. However, in November 2022, the Discharger installed a reverse osmosis system to concentrate whey wastewater and reduce the amount of waste hauled offsite. The resulting permeate from the reverse osmosis system is either reused for pre-rinse and wash water or discharged to Pond 1. Solids from the screen are placed in a dumpster and disposed of at Glenn County Landfill.

GROUNDWATER CONSIDERATIONS

Groundwater conditions are discussed in Findings 26 to 37 of the Order.

ANTIDEGRADATION

Antidegradation analysis and conclusions are discussed in Findings 54 to 59 of the Order.

DISCHARGE PROHIBITIONS, EFFLUENT LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS

The Order sets a maximum daily flow limit of 60,000 gallons per day for the Facility's discharge to the series of three treatment ponds. The Order also specifies interim, performance-based effluent limitations, as well as participation in the Prioritization and Optimization Plan for the Salt Control Program and the Nitrate Control Program.

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 waters of the State. Water Code Section 13268 authorizes assessment of administrative civil liability where appropriate. The Order includes influent, effluent, solids, and groundwater monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications in the Order.

SALT AND NITRATE CONTROL PROGRAMS REGULATORY CONSIDERATIONS

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. On 16 October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 approving the Central Valley Water Board Basin Plan amendments and also directed the Central Valley Water Board to make targeted revisions to the Basin Plan amendments within one year from the approval of the Basin Plan amendments by the Office of Administrative Law. The Office of Administrative Law approved the Basin Plan amendments on 15 January 2020 (OAL Matter No. 2019-1203-03). For those components subject to United States Environmental Protection Agency (USEPA) approval, the effective date was 2 November 2020. On 10 December 2020, the Central Valley Water Board adopted revisions to the Basin Plan amendments (Resolution R5-2020-0057). The State Water Board conditionally approved these revisions on 1 June 2021 (State Water Board Resolution 2021-0019). The effective date of the revisions to the Basin Plan amendments was 10 November 2021, the Notice of Decision filing date following OAL approval (OAL Matter No. 2021-0929-05S). Surface-water related revisions to the Basin Plan amendments are pending USEPA approval.

For the Salt Control Program, a Notice to Comply for the Salt Control Program was issued to Sierra Nevada Cheese (CV-SALTS ID 1890) was issued a Notice to Comply for the Salt Control Program on 5 January 2021. On 1 April 2021, the Discharger paid the fee payment to join the P&O Study.

For the Nitrate Control Program, this order includes a compliance schedule requiring the Discharger to (1) conduct a Sensitive Receptor Survey and determine if any water supply wells are impacted by the Discharger's discharge of nitrate; (2) implement an Early Action Plan as needed; and (3) implement an Alternative Compliance Project(s) as needed.

REOPENER

The conditions of discharge in the Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that changes 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.