CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION


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# [TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-####

## ORDER INFORMATION

| | |
|---|---|
| **Order Type(s):** | Waste Discharge Requirements (WDRs) |
| **Status:** | TENTATIVE |
| **Program:** | Non-15 |
| **Region 5 Office:** | Fresno |
| **Discharger(s):** | Califia Farms, LLC, North Kern Water Storage District, and Paramount Ranch L.P. |
| **Facility:** | Califia Farms Bakersfield Facility |
| **Address:** | 33502 Lerdo Highway, Bakersfield |
| **County:** | Kern County |
| **Parcel Nos.:** | 091-310-02-9 |
| **CIWQS Place ID:** | 766070 |
| **Prior Order(s):** | R5-2017-0019 |

## 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 _____ August 2022.

_____

PATRICK PULUPA,
Executive Officer

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# GLOSSARY

| | |
|---|---|
| Antidegradation Policy | Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16 |
| Basin Plan | Water Quality Control Plan for [BASIN] |
| Bgs | Below Ground Surface |
| BOD[5] | [Five-Day] Biochemical Oxygen Demand at 20° Celsius |
| BPTC | Best Practicable Treatment and Control |
| CEQA | California Environmental Quality Act, Public Resources Code section 21000 et seq. |
| CEQA Guidelines | California Code of Regulations, Title 14, section 15000 et seq. |
| C.F.R. | Code of Federal Regulations |
| COC[s] | Constituent[s] of Concern |
| DO | Dissolved Oxygen |
| DTSC | California Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EC | Electrical Conductivity |
| EIR | Environmental Impact Report |
| FDS | Fixed Dissolved Solids |
| FEMA | Federal Emergency Management Agency |
| IPP | Industrial Pretreatment Program |
| LAA | Land Application Area |
| lbs/ac/yr | Pounds per Acre per Year |
| µg/L | Micrograms per Liter |
| µmhos/cm | Micromhos per Centimeter |
| MG[D] | Million Gallons [per Day] |

**GLOSSARY**

| | |
|---|---|
| mg/L | Milligrams per Liter |
| msl | Mean Sea Level |
| MRP | Monitoring and Reporting Program |
| MW | Monitoring Well |
| MCL | Maximum Contaminant Level per Title 22 |
| mJ/cm2 | Millijoules per Square Centimeter |
| N | Nitrogen |
| ND | Non-Detect |
| NE | Not Established |
| NM | Not Monitored |
| ORP | Oxygen Reduction Potential |
| Recycled Water Policy | Policy for Water Quality Control for Recycled Water, State Water Board Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057 |
| R[O]WD | Report of Waste Discharge |
| RCRA | Resource Conservation and Recovery Act |
| SPRRs | Standard Provisions and Reporting Requirements |
| 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) |

**GLOSSARY**

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. Califia Farms, LLC, (Califia) manufactures plant-based products (milk, yogurts, juices, and specialty coffee drinks) at its processing facility (Facility) located at 33502 Lerdo Highway, approximately 10 miles north-northwest of Bakersfield in Kern County, Section 11, Township 28 S, Range 26 E, Mount Diablo Base and Meridian (MDB&M). Califia owns and operates the Facility. The Facility location is depicted on the Project Location Map in **Attachment A**.

2. The North Kern Water Storage District (District) encompasses an area of approximately 60,000 acres in Kern County, northwest of Bakersfield, east of Shafter and Wasco, and west of McFarland as shown on the Project Location Map in **Attachment A**. The District owns the Lerdo Canal, which is adjacent to the Facility.

3. The Facility is within Kern County Assessor Parcel Number (APN) 091-310-02-9. The parcel consists of approximately 484.49 acres and is owned by the Paramount Ranch L.P. The Facility operations are situated on about 16 acres along the southern edge of the parcel.

4. The District uses Lerdo Canal to deliver water for irrigated agricultural uses during the irrigation season (typically March through November) and to convey water for recharge to the District's groundwater spreading facilities, like the Rosedale Spreading Basin, during the non-irrigation season.

5. Califia currently discharges its process wastewater from the Facility under WDRs Order R5-2017-0019 via pipeline into the District's Lerdo Canal to supplement the District's irrigation water supply. During the non-irrigation season, the remaining water in the canal is diverted to spreading basins such as the Rosedale Spreading Basin for groundwater recharge.

6. The District shuts down the Lerdo canal annually for maintenance. Depending on where canal maintenance is needed, the Facility's wastewater may need to be trucked to the Rosedale Spreading Basins for up to two weeks (14 days).

7. The Facility, the approximate location of the pipeline and outfall into the Lerdo Canal, and the Lerdo Canal itself are shown on the Facility Map in **Attachment B**. The Rosedale Spreading Basin is shown on the Rosedale Spreading Basin Map in **Attachment C**.

8. Califia, as owner and operator of the Facility, the District, as owner and operator of the Lerdo Canal, and Paramount Ranch L.P., as the owner of the Facility land, are collectively referred to as Discharger[s] are responsible for compliance with the WDRs prescribed herein.

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

   a. Attachment A —Project Location Map

   b. Attachment B —Facility Map

   c. Attachment C —Rosedale Spreading Basin Map

   d. Attachment D–Califia Facility Flow Schematic

   e. Attachment E—Lerdo Canal Flow Schematic

   f. Standard Provisions & Reporting Requirements dated 1 March 1991 (SPRRs).

   g. Information Sheet.

10. Also attached is **Monitoring and Reporting Program R5-2022-####** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs.

11. WDRs are needed for this Facility to ensure the discharge will comply with water quality plans and policies.

## Regulatory History

12. Califia began operations at the Facility in 2011. Initially, Califia discharged wastewater from the Facility via land application to about 1,100 acres of land application areas generally north of the Facility and Lerdo Highway under WDRs Order 96-169, which were originally issued to Exeter Packers (dba Sun Pacific Shippers) in 1996.

13. In 2015, Califia submitted a Report of Waste Discharge (RWD) proposing to discharge Califia's process wastewater via pipeline into the Lerdo Canal to supplement the District's irrigation water supply.

14. In February 2017, the Central Valley Water Board issued WDRs Order R5-2017-0019, which regulates the discharge of up to 0.15 mgd of wastewater year-round into the Lerdo Canal and to the Rosedale Spreading Basin during the winter months when irrigation demand lessens and during annual maintenance of the Lerdo Canal.

15. Califia submitted a RWD in April 2021 (April 2021 RWD) requesting an increase in the permitted discharge from 0.15 mgd to 0.5 mgd. Central Valley Water Board

staff reviewed the April 2021 RWD and issued a 26 May 2021 letter and memorandum to Califia requiring additional information to complete the RWD. The requested information included:

a. A monthly water balance that demonstrates sufficient treatment and storage capacity for 0.5 mgd.

b. Oxidation ditch designed treatment capacity, construction details and maintenance, and confirmation that the oxidation ditch has the ability to treat 0.5 mgd.

c. A revised antidegradation analysis that evaluates the Facility's impact on groundwater with regards to total nitrogen.

d. Information of the Discharger's plan to comply with the Salt and Nitrate Control Programs.

16. A revised RWD was submitted on 29 July 2021 (July 2021 RWD) that provided/addressed the items requested in staff's May 2021 letter.

## Facility and Discharges

### Existing Facility, Discharges, and Sampling

17. Process wastewater at the Facility is generated during the manufacturing and processing of its plant-based products and is comprised of primarily (93 percent) wash water used to sanitize and sterilize the processing equipment. The remaining seven percent is generated from the Facility's water treatment system used to treat the incoming source water. A flow schematic of the Facility's treatment process is included herein as **Attachment D**.

18. The discharge of domestic wastewater is to an onsite septic tank leach field system regulated by Kern County.

19. Process wastewater is screened to remove solids. The volume of solids removed by screening is limited as Califia uses powdered products and concentrates and does not process fruits and vegetables onsite.

20. Source water is filtered using granulated activated carbon (GAC) to oxidize dissolved sulfide and convert it to sulfate. The treated water is disinfected (via chlorine dioxide) and stored in a 20,000-gallon tank (i.e., Tiger Tank) where the water is used at the Facility in one of the following three ways (as shown in Attachment D):

a. For equipment cleaning and sterilizing (wash water is discharged to the oxidation ditch).

b. Further treated by a multi-media filter, GAC system, and nanofiltration and then used as a product ingredient (backwash/reject water from the multi-media filter, GAC system, and nanofiltration filter is discharged to the oxidation ditch).

c. Further treated through a water softener and used in a condenser (water softener backwash and condenser blowdown are discharged to the oxidation ditch).

21. The oxidation ditch was constructed in 2013 and is lined with a 60-mil high-density polyethylene (HDPE) liner. The operational capacity of the oxidation ditch is 600,000 gallons (with a 2-foot freeboard).

22. The April 2021 RWD notes that increases in Facility production volumes resulted in the Facility's discharge flow increasing steadily as shown in Table 1.

**Table 1 – Califia Annual Average Flows**

| Year | Annual Average Flow (mgd) |
|---|---|
| 2017 | 0.129 |
| 2018 | 0.161 |
| 2019 | 0.207 |
| 2020 | 0.241 |
| 2021 | 0.220 |

23. The Facility's effluent salinity has significantly decreased since 2017. WDRs Order R5-2017-0019 required Califia to develop and submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule. In 2019, Califia submitted a Salinity Management Plan focused on EC, sodium, and chloride. Table 2 below summarizes the effluent concentrations/levels over the past few years. According to the 2021 RWD, the decrease effluent salinity concentrations is due to the following changes implemented at the Facility:

a. In 2017, Califia completed the installation of a new supply well, and replaced its chloride oxidation treatment method for sulfide removal with a granulated activated carbon system;

b. In 2018, Califia implemented various changes to the types of industrial chemical cleaners used at the Facility (changed caustic disinfectant and now uses potassium chloride to regenerate the water softener);

c. In 2019, Califia replaced the reverse osmosis system with a nanofiltration system; and

d. In 2020, Califia changed the chemicals used for disinfection of the source water (from liquid sodium hypochlorite to chlorine dioxide).

**Table 2 – Effluent Salinity Trends**

| Constituent (units) | Sep 2016 – May 2017 | Jun 2017 – May 2018 | Jun 2018 – Dec 2019 | Jan - Oct 2020 | Nov – Dec 2020 |
|---|---|---|---|---|---|
| EC (µmhos/cm) | 2,553 | 2,103 | 1,438 | 1,339 | 1,229 |
| Sodium (mg/L) | 674 | 536 | 313 | 305 | 280 |
| Chloride (mg/L) | 194 | 125 | 132 | 121 | 116 |

24. MRP R5-2017-0019 requires Califia to collect effluent samples and analyze the effluent for the constituents listed below in Table 3. A summary of 2021 effluent monitoring results is presented in Table 3.

**Table 3 – 2021 Effluent Data**

| Constituent (units) | 1st 2021 | 2nd 2021 | 3rd 2021 | 4th 2021 |
|---|---|---|---|---|
| EC (µmhos/cm) | 1,422 | 1,408 | 1,364 | 1,235 |
| TDS (mg/L) | 1,128 | 1,257 | 1,174 | 1,062 |
| Chloride | 130 | 130 | 140 | 130 |
| BOD (mg/L) | 1,124 | 823 | 480 | 602 |
| $NO_3$ as N (mg/L) | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Ammonia (mg/L) | 0.39 | 1.7 | 4.1 | 0.8 |
| Total N (mg/L) | 40 | 35 | 29 | 27 |

Lerdo Canal Flows and Sources

25. The primary water sources for the Lerdo Canal are from the Kern River, the Friant-Kern Canal, and/or groundwater wells within the District's service area. As part of a drought relief project, in 2015 the District began accepting treated produced oil field water from the California Resources Corporation (CRC). In 2016, as part of the same drought relief project, the District agreed to accept

Califia's process wastewater with expectations that Califia would reduce the salinity of its discharge. A flow chart of the sources of water into the Lerdo Canal is shown in **Attachment E**.

26. The volume of water in the Lerdo Canal fluctuates based on available water supplies and demand. The 2021 RWD indicates the average flow in the Lerdo Canal is about 109 cubic feet per second, or approximately 70 mgd, measured at Station B along the Lerdo Canal. Table 4 below includes the approximate flow and volumes of all the water sources in the Lerdo Canal from 2020 and averages about 81 mgd. Based on the data in Table 4, Califia's discharge at the previous flow limit of 0.15 mgd and the proposed flow limitation of 0.5 mgd comprises 0.2 and 0.6 percent, respectively, of the total flow in the Lerdo Canal.

**Table 4 – District Water Sources**

| Source | Flow (mgd) |
|---|---|
| Kern River | 53.6 |
| CRC Produced Oil Filed Water | 6.3 |
| Groundwater A (see 2 below) | 14.9 |
| Groundwater B (see 3 below) | 5.9 |
| Califia (WDRs Order R5-2017-0019 flow limit) | 0.15 |
| Califia (Proposed flow limit) | 0.5 |

1. Groundwater A represents groundwater extracted from groundwater wells located around the Rosedale Spreading Basin and discharged into the Lerdo Canal at Lateral 8.1, which is upstream of the Califia Farms discharge point.
2. Groundwater B is extracted from two District wells that pump directly into the Lerdo Canal upstream of the Califia Farms discharge point.

Rosedale Spreading Basin Discharge and Estimated Water Quality

27. During the non-irrigation season, when demand for irrigation is low, waters in the Lerdo Canal are diverted to spreading basins, including the Rosedale Spreading Basin for groundwater recharge. In January of most years, the Lerdo Canal is closed for maintenance along certain sections and Califia discharges the Facility's wastewater to the Rosedale Spreading Basin. During these

maintenance activities, discharges to the Rosedale Spreading Basin consist of Kern River supplies, CRC produced water, and Califia's Facility effluent.

28. When the Lerdo Canal is closed for maintenance, Califia may discharge the Facility's effluent via 5,000-gallon trucks into lateral pools within the Rosedale Spreading Basin where it is blended with other water supplies. However, discharge via trucks is infrequent (which last occurred in 2017). In recent years, Califia and the District have coordinated when maintenance occurs to minimize potential disruptions. During the Lerdo Canal shutdown, Califia performs required maintenance to the Facility that reduces wastewater production until the discharge to the canal can resume.

Proposed Flow Increase and Estimated Water Quality

29. To evaluate the potential impact of increasing the Facility's discharge limit from 0.15 mgd to 0.5 mgd, the 2021 RWD estimated EC and chloride quality within the Lerdo Canal and in the Rosedale Spreading Basin as shown in Tables 5 and 6. The modeled results show little to no variation in the EC and chloride values projected for the blended waters in the Lerdo Canal as the result of the proposed increased flow from the Facility. The District Limits are agricultural thresholds the District implements for the water it uses for irrigation. They are not enforced as a part of this Order.

**Table 5 – Lerdo Canal Sources (Water Quality)**

| Source | EC (µmhos/cm) | Chloride (mg/L) |
|---|---|---|
| Lerdo Canal -Station B Flows | 409 | 40 |
| CRC Produced Oil Field Groundwater | 611 | 66 |
| Groundwater | 2,057 | 72 |
| Califia | 1,229 | 116 |

**Table 6 – Lerdo Canal Modeled Water Quality Results**

| Results | EC (µmhos/cm) | Chloride (mg/L) |
|---|---|---|
| Blended Water Quality without Califia Discharge | 511 | 65 |

| | | |
|---|---|---|
| Blended Water Quality with Califia Discharge at 0.15 mgd. | 512 | 65 |
| Blended Water Quality with Califia Discharge at 0.5 mgd | 516 | 66 |
| District Limits | <650 | <100 |

30. The attached MRP requires the Discharger to sample the Lerdo Canal (upstream and downstream of the Facility's discharge point) to characterize the actual impacts of the Facility's discharge on the Lerdo Canal water.

31. The 2021 RWD also modeled the water quality of the discharges into the Rosedale Spreading Basin during the non-irrigation season, as shown in Table 7. The EC of the Facility's discharge is elevated when compared to the other two sources. However, the Facility's discharge volume represents less than one percent (about 0.3%) of the total discharge to the Rosedale Spreading Basin during non-irrigation season. Therefore, little to no change is anticipated for the EC of the blended waters discharged to the Rosedale Spreading Basin.

**Table 7 – Rosedale Spreading Basins (Flow and Water Quality)**

| Source | Acre-Feet/Year | EC (µmhos/cm) | Chloride (mg/L) |
|---|---|---|---|
| Kern River | 5,226 | 201 | 5.7 |
| CRC Produced Groundwater | 1,849 | 432 | 7 |
| Califia | 22 | 1,229 | 116 |

## Site-Specific Conditions

Topography, Climate, and Land Use

32. The Facility elevation is about 440 feet above mean sea level and the natural land surface slopes gently to the southwest. The nearest surface water is the man-made Lerdo Canal, which is about 1,000 feet southwest of the Facility. The nearest natural water body is Poso Creek, which is located about four miles north/northwest of the Facility.

33. According to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service, soils in the northern portion of the District consist primarily of Wasco sandy loam and the McFarland loam, with lesser amounts of Lewkalb sandy loam, Milham sandy loam, Driver

coarse sandy loam, and the Kimberlina fine sandy loam. Soils in the Rosedale Spreading Basin are in similar percentages, but the Lewkalb sandy loam is not present.

34. The Wasco sandy loam is a Class 2s soil that has moderate limitations that reduce the choice of plants or that require moderate conservation practices. The "s" subclass indicates the soil is limited mainly because it is shallow, droughty, or stony. The Wasco sandy loam is described as well drained with a high capacity to transmit water. The McFarland loam is a Class 1 soil that has few limitations that restrict usage. The McFarland loam is listed as prime farmland that, if irrigated, is well drained with a moderately high capacity to transmit water.

35. The region is characterized by hot dry summers and cooler, humid winters. The rainy season generally extends from November through March. Average annual precipitation is about 6.5 inches and annual evapotranspiration data is 54.6 inches with monthly averages ranging from 1.3 inches in January and December to 8.1 inches in July (California Irrigation Management Information System (CIMIS) Shafter Station # 5). The 100-year, 24-hour maximum precipitation is about 2.9 inches, based on maps obtained from the Kern County Resource Management Agency, Engineering, Survey and Permit Services, Floodplain Management Section.

36. The Facility is on the edge of the Federal Emergency Management Agency (FEMA) flood maps, and there is no coverage directly north of the Facility. According to FEMA map number 06029C1800E, the area directly south of the Facility and the Rosedale Spreading Basin are outside of the 100-year return frequency flood zones. According to FEMA Map Numbers 06029C0725E and 06029C1280E, portions of the proposed irrigated acreage in the northern portion of the District along Poso Creek and both spreading basins set along Poso Creek are within a 100-year return flood event. Considering the quality of the blended wastewaters and that the surface waters are already used so that the blended discharge will meet District irrigation standards, inundation by floodwaters of the two northernmost spreading basins would not threaten the underlying groundwater quality.

37. Land usage surrounding the Facility is primarily agricultural with industrial facilities present to the west. The RWD notes that the majority of the 60,000 acres within the District's boundaries are agricultural with the majority of those acres planted with permanent crops including nuts, vineyards, and fruit trees. A Sun Pacific citrus packing facility is directly adjacent to the west of the Califia Farms Facility. Several industrial facilities including a Grimmway citrus processing facility are present about a mile west of the Califia Farms Facility near the intersection of Lerdo Highway and State Highway 99.

## District Groundwater and Subsurface Conditions

38. The District, in accordance with Water Code section 10750, implements a Groundwater Management Plan. The District adopted an updated Groundwater Management Plan (Plan) in August 2012 with an overarching goal of "preserving the groundwater resource as a viable source of water supply to support overlying uses into the foreseeable future through local control and management." The objectives of the plan are:

- Maintain groundwater levels at economically viable pumping depths for the overlying agricultural uses.
- Protect groundwater quality in general and minimize increases in salinity.
- Avoid conditions conducive to inelastic land surface subsidence.
- Protect and preserve surface water rights and contracts.
- Protect and preserve surface water quality.

40. The District adopted an Agricultural Water Management Plan (AWMP) in August 2014 in accordance with the requirements of the Water Conservation Bill of 2009 (SBX7-7, Water Code §10820). The AWMP presents the District's existing and planned activities and programs designed to improve water use efficiency.

41. The District is in the recharge area of the Kern County Subbasin. The aquifer system in the District area consists of unconfined conditions in the upper few hundred feet and confined conditions at greater depths depending on the local extent of the clay layers. Within this region, there are three general zones of clay lenses named the "300-foot clay", the "700-foot clay", and the "900-foot clay" as shown in the geologic cross sections in the 2012 North Kern Groundwater Management Plan. The 300-foot clay is not entirely continuous and so allows for downward groundwater movement. The 700-foot clay is generally thicker and more continuous than the 300-foot clay. In the eastern side of the basin, including the District, freshwater occurs to depths of approximately 1,500 feet. Hydrologic conditions of the District differ from those of adjacent areas to the west where shallow clay layers restrict surface water percolation.

42. Subsurface conditions in the Rosedale Basin were evaluated using available well logs, and logs for a series of six shallow borings placed in the dominant soil types present in the spreading basin. Available well logs for three of the seven wells located within the Rosedale Basin were analyzed. Soil textures in the upper 100 feet below the ground surface (bgs) are generally silty or clayey sands, textures between 100 and 350 feet bgs are generally sands and gravels, and below 350 feet bgs, there are varying layers of sands, gravels, and clays. The 300-foot clay, 700-foot clay, and 900-foot clay layers appear to be present

beneath the Rosedale Basin, with a possible additional clay layer present at around 500-feet bgs. The well logs and boring logs were also analyzed to determine the ratio of coarse-grained material (sands and gravels, including trace clays or silts) to fine-grained materials (clays and silts). Overall, the ratio was determined to be 52 percent coarse-grained material to 48 percent fine-grained material. The surface soils and alluvium present at the Rosedale Basin are primarily poorly graded sands underlain by silty and sandy alluvium to a depth of 30 feet bgs.

43. The groundwater flow direction in the southern half of the District, including beneath the Rosedale Basin, has generally been from the southeast to the northwest, with a gradient of 12 to 15 feet per mile (ft/mi). In the northern half of the District, the groundwater flow direction has generally been from east to west, with a gradient of 7 to 10 ft/mi. The groundwater flow gradient in the vicinity of the Rosedale Basin was estimated to be 17 ft/mi. The transmissivity of the aquifer is estimated to be 160,000 to 460,000 gallons per day per foot and the hydraulic conductivity is approximately 53 to 152 feet per day. Based on these estimates of aquifer properties and using the 2012 hydraulic gradient estimate of 17 ft/mi, the flow of the groundwater underlying the Rosedale Basin is estimated to be between 3.8 and 11 mgd.

44. The District monitors several deep extraction wells and one 400-foot deep monitoring well (when water is present) that are within the Rosedale Spreading Basin. Table 8 shows groundwater results for wells within the District and those that are specifically within the Rosedale Basin. The majority of the data presented in Table 8 was collected in 2015 for the development of WDR Order R5-2017-0019. The first number shown is the average and the range is to the right in parentheses.

**Table 8 – District Groundwater Monitoring Results**

| Constituents | District Well | Rosedale Spreading Basin Wells |
|---|---|---|
| EC (µmhos/cm) | 659 (160 – 2,500) | 429 (240 -980) |
| Boron (mg/L) | 0.11 (0.1 – 0.48) | 0.13 (0.1 – 0.22) |
| Chloride (mg/L) | 72 (9 – 470) | 47 (9 – 100) |
| Sodium (mg/L) | 80 (20 – 300) | 74 (13 – 160) |

Facility Source Water and Area Groundwater Conditions

45. Source water is supplied to the Facility by an onsite well (Well 1). The well was installed in 2016 to a depth of 1,037 feet bgs with a screened interval from 810 to 1,030 feet bgs. Source water was previously supplied to the Facility by a well shared with the adjacent Sun Pacific operation. The EC of the former supply well averaged 554 µmhos/cm and sulfate averaged 70 mg/L The quarterly analytical results from the fourth quarter of 2020 through the third quarter of 2021 are shown in Table 9. All the results are less than applicable Primary and Secondary MCLs.

**Table 9 – Califia Supply Well Quality**

| Constituent (units) | 4th 2020 | 1st 2021 | 2nd 2021 | 3rd 2021 |
|---|---|---|---|---|
| pH (s.u.) | 8.09 | 9.09 | 9.05 | 8.55 |
| EC (µmhos/cm) | 343 | 345 | 368 | 371 |
| TDS (mg/L) | 220 | 210 | 250 | 250 |
| Chloride (mg/L) | 64 | 63 | 67 | 66 |
| Sodium (mg/L) | 65 | 67 | 69 | 62 |
| Sulfate (mg/L) | 15 | 14 | 16 | 21 |
| Bicarbonate (mg/L) | 56 | 50 | 50 | 51 |
| Total Alkalinity (mg/L) | 51 | 59 | 56 | 48 |
| $NO_3$ as N (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 |
| Ammonia (mg/L) | <0.2 | <0.2 | <0.2 | <0.2 |

46. There are no monitoring wells at the Facility, but depth to groundwater information and groundwater elevation maps are available on the California Department of Water Resources (DWR) SGMA Data Viewer (https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer). Groundwater elevations for spring 2021 show that the predominant flow direction is to the northwest/west, but a slight cone of depression appears near the location of the Facility. The depth to water was about 430 feet bgs, with a corresponding groundwater elevation of about 10 feet above msl.

47. Order R5-2017-0019 contains background groundwater quality information that is relevant to this Order. The results are primarily from 2015 and were collected to

support the issuance of WDR Order R5-2017-0019. Background groundwater quality for the District, the Rosedale Spreading Basin, and the adjacent Cawelo Water District are presented in Table 10.

**Table 10 – Background Groundwater Quality Data**

| Constituent (units) | North Kern Water Storage District | Rosedale Spreading Basin | Cawelo Water District |
|---|---|---|---|
| EC (µmhos/cm) | 659 | 429 | 618 |
| Chloride (mg/L) | 72 | 47 | 88 |
| Sodium (mg/L) | 80 | 74 | 56 |

**Statutory Authority**

48. 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.*

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

50. 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).)

51. 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.*

52. 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

53. 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

54. 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.)

55. The beneficial use of water in the District's spreading basins and distribution systems is by design, agricultural supply. Poso Creek is the nearest surface water body and flows into the South Valley Floor hydrologic unit, Valley Floor Waters. The beneficial uses of Poso Creek, as stated in the Basin Plan for Hydrologic Area Nos. 555 and 558, are agricultural supply (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); groundwater recharge (GWR); and freshwater replenishment (FRSH).

56. The District is in the Kern County Basin hydrologic unit, Poso groundwater hydrographic unit. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility are municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

### Water Quality Objectives

57. The Basin Plan establishes narrative WQO's 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.

58. The Basin Plan's narrative WQO's 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.

59. 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.

60. 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 µmhos/cm. There is, however, an eight-to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000 µmhos/cm, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Salt and Nitrate Control Programs

61. 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. The Basin Plan amendments were conditionally approved by the State Water Board on 16 October 2019 (Resolution 2019-0057) and the Office of Administrative Law on 15 January 2020 (OAL Matter No. 2019-1203-03) and became effective on 17 January 2020.

62. The Basin Plan, section 4.1.11.5 (Discharges to Land) includes, in part, additional effluent limits for the Poso Creek Subarea, which consists of about 35,000 acres of land between State Highways 99 and 65 about six miles north of Bakersfield and is defined more specifically in Regional Water Board Resolution No. 71-122. For the Poso Creek Subarea, the Tulare Lake Basin Plan states discharges shall not exceed 1,000 µmhos/cm for EC, 200 mg/l for chloride, and 1.0 mg/l for boron. WDRs Order R5-2017-0019 specified these concentrations/levels as limits that the blended discharge of Facility effluent and water within Lerdo Canal could not exceed. As discussed more in the next Finding, these WDRs specify these concentrations/levels as Salinity Action Levels in accordance with the Salt Control Program.

63. For the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger (**CV-SALTS ID 2884**) was issued a Notice to Comply for the Salt Control Program on 5 January 2021. On 28 June 2021, the Discharger paid the fee payment to join the P&O Study. In the interim, to maintain existing salt discharges and minimize salinity impacts, this Order:

    a. Requires the Discharger to continue efforts to control salinity in its discharge to the extent feasible; and

    b. Sets Salinity Action Levels of 1000 µmhos/cm for EC, 1.0 mg/L for boron, and 200 mg/L for chloride for the blended wastewater within the Lerdo Canal. As previously discussed, these Salinity Action Levels are based on the Basin Plan effluent salinity limits established for the Poso Creek Subarea.

64. For the Nitrate Control Program, dischargers that are 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). The Facility falls within Groundwater Sub-Basin 5-22.14 (Northeastern Kern County), a Priority 2 Basin. Notices to Comply for Priority 2 Basins have not been issued. The July 2021 RWD states Califia has yet to select a path for the Nitrate Control Program due to the lack of sufficient data to appropriately assess potential nitrogen impacts on groundwater. This Order contains Provision H.5 requiring Califia to gather sufficient data to make an informed decision on what Pathway they intend to pursue for the Nitrate Control Program. Dischargers in Priority 2 Basins will receive a Notice to Comply for the Nitrate Control Program between 2022 and 2024.

## Compliance with Antidegradation Policy

65. 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 the discharger’s best practicable treatment or control (BPTC).

66. Califia’s discharge is treated in a lined oxidation ditch prior to be discharged into the Lerdo Canal where it blends with other freshwater sources and is used

primarily for the irrigation of crops and to a lesser extent groundwater recharge. The anticipated results of the blended waters when discharged to the Lerdo Canal are presented in Table 6 in Finding 30 and when discharged to the Rosedale Spreading Basin in Table 7 in Finding 32. Constituents of concern (COCs) that could have the potential to degrade groundwater include salts (EC and TDS), nitrates, and organics. Table 11 below summarizes relevant water quality data for these COCs.

**Table 11 – Constituents with Potential for Degradation**

| Constituent | Units | 2021 Califia Effluent Averages | Estimated Blended Values | Background Groundwater Values | WQOs |
|---|---|---|---|---|---|
| EC | µmhos/cm | 1,357 | 516 | 659 | 700 |
| TDS | mg/L | 1,155 | --- | --- | 500 |
| Nitrate (as N) | mg/L | <0.5 | --- | --- | 10 |
| Total Nitrogen | mg/L | 28 | --- | --- | --- |
| BOD | mg/L | 757 | --- | --- | --- |

a. **Salinity.** For salinity, the Facility's wastewater could threaten/degrade the underlying groundwater quality if discharged to land without any blending. However, the wastewater is blended with waters in the Lerdo Canal and represents less than one percent of the total flow in the Lerdo canal. Due to the significant volumes of water in the Lerdo Canal, the 2021 RWD's model shows only a 5 µmhos/cm increase in EC in the Lerdo Canal. The estimated Lerdo Canal blended EC level (about 516 µmhos/cm) is less than the water quality objectives and less than background groundwater concentrations.

As with the discharge to the Lerdo Canal, the Facility's discharge to the Rosedale Spreading Basins during the non-irrigation season is mixed along with CRC oil field produced groundwater (1,849 acre-feet in 2020) and other available water sources (Kern River water 5,226 acre-feet in 2020). Therefore, the 2021 RWD estimates the discharge will result in little to no change in the blended water qualities discharged to the Rosedale Spreading Basin.

b. **Nitrate.** As shown in Table 11 above, nitrate and total nitrogen effluent data is available for the Facility's discharge but not the upstream or blended waters in the Lerdo Canal. Without nitrate and total nitrogen data for the other sources of water in the Lerdo Canal, the Discharger was

unable to assess the potential nitrogen load to the water in the Lerdo Canal. This Order contains Provision H.5, which requires Califia to submit a work plan to gather the necessary nitrogen data within the Lerdo Canal. This data will better characterize the potential impacts the Facility's discharge has on the nitrogen concentrations within the Lerdo Canal and allow the Discharger to make an informed decision on what Pathway they intend to pursue for the Nitrate Control Program. Furthermore, the attached MRP requires the Discharger to regularly collect upstream and downstream nitrogen data to characterize the nitrogen concentrations in the Lerdo Canal.

c. **Organics.** As the flow increases in the oxidation ditch, the effluent BOD concentrations may increase due to reduced detention times within the oxidation ditch. The Facility's discharge of wastewater with elevated BOD concentrations could result in the degradation of the underlying groundwater if it was not blended with surface waters and there is not adequate acreage for disposal. However, as previously indicated, the discharge is blended with other water sources within the Lerdo Canal and represents less than one percent of the total flow in the Lerdo Canal. Additionally, the District encompasses about 60,000 acres of which the District irrigates over 50,000 acres annually. Any potential impact associated with the organic content of the discharge will be mitigated by the blending and the acreage available for disposal.

67. The Discharger implements, or will implement, as required by this Order, the following BPTC measures:

a. Wastewater is treated in a lined oxidation ditch prior to discharge to the Lerdo Canal or Rosedale Spreading Basin.

b. Removal of suspended solids and sediment from the waste stream prior to discharge into the oxidation ditch.

c. Comprehensive wastewater/effluent monitoring;

d. Significant reduction of effluent salinity concentrations through various changes to the Facility;

e. Implementation of a Salinity Management Plan;

f. Compliance with the Salinity Action Levels for EC, chloride, and boron; and

g. Compliance with the Salt and Nitrate Control Programs.

68. The Discharger's implementation of the above-listed BPTC measures, and the dilution provided by higher quality water in the Lerdo Canal and Rosedale Spreading Basins, will minimize the extent of water quality degradation resulting from the Facility's continued operation.

69. 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.

70. The Facility contributes to the economic prosperity of the region by providing a necessary service and employment for the local community; by providing incomes for numerous aligned businesses; and by providing a tax base for local and county governments. In 2022, Califia employed about 185 employees at the Facility. 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.

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

**California Environmental Quality Act**

72. In accordance with the requirements of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the District prepared an Initial Study and Negative Declaration (IS/ND) for the construction of a 1,200 foot, 6-inch pipeline from the Facility to the Lerdo Canal. The IS/ND was circulated for public review and comment from 15 April 2016 through 16 May 2016 (State Clearinghouse No. 2016041044). The Board, acting as a responsible agency, was consulted during the development of these documents. The District certified the IS/MND and issued a Notice of Determination on 11 July 2016. In the Negative Declaration, the District found that the "project," would not have a significant effect on the environment.

73. In accordance with the requirements of CEQA, the District prepared an IS/ND for the requested flow increase to 0.5 mgd. The IS/ND was circulated for public review and comment from 30 April 2021 to 1 June 2021 (State Clearinghouse No. 2021040728. The District certified the IS/MND and issued a Notice of Determination on 15 June 2021. In the Negative Declaration, the District found there would be no significant effect on the environment provided the discharge was blended with the water sources present in the Lerdo Canal.

## Other Regulatory Considerations

### Human Right to Water

74. 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. This General Order promotes this policy by including process water discharge specifications and prohibitions and requiring that discharges not cause or contribute to exceedances of water quality objectives that have been developed to protect municipal and domestic water supplies.

### Threat-Complexity Rating

75. 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

76. 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

77. Stormwater at the Facility is routed to and collected in an onsite unlined stormwater basin where it either percolates into the underlying soil and potentially to groundwater or evaporates in the stormwater basin. 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).

## Scope of Order

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

79. 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 (ROWD) per Water Code section 13260.

80. 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.

81. 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.

## Procedural Matters

82. 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.

83. 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.)

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

85. 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 R5-2017-0019 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 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. Discharge of wastes other than the treated Califia Farms process wastewater at the location and in the manner described in the Findings and authorized herein is prohibited.

4. The bypass or overflow of wastes to surface waters is prohibited.

5. Except as provided in Section E.2 of the SPRRs, incorporated herein, untreated wastes and partially treated wastes shall not bypass the treatment system (including treatment ponds).

6. The discharge of water from canals used to transport Facility effluent (e.g., Lerdo Canal) to canals used to transport municipal and domestic water sources (e.g., Friant Kern Canal and/or others) is prohibited.

7. The discharge of toxic substances into any wastewater treatment system, the Lerdo Canal, or the Rosedale Spreading Bains such that biological treatment mechanisms are disrupted is prohibited.

8. The discharge of industrial wastewater to the septic systems is prohibited.

## C. Flow Limitation

1. Effectively immediately, effluent flows from the Facility to the Lerdo Canal and/or the Rosedale Spreading Basin shall not exceed a maximum daily limit of 0.5 mgd.

## D. Salinity Action Levels

1. To comply with the Salt Control Program, the Discharger has selected the Alternative Salinity Permitting Approach (i.e., participate in the Prioritization and Optimization [P&O] Study). Therefore, as discussed in Findings 61 through 64, these WDRs establish the **Salinity Action Levels** listed in Table 12 below. These Salinity Action Levels shall be accessed annually. The

following Salinity Action Levels apply to the blended discharge of Facility process wastewater and water within the Lerdo Canal (Monitoring Location LC-002).

**Table 12 – Salinity Action Levels (Blended Discharge)**

| Constituent | Units | Annual Average |
|---|---|---|
| Electric Conductivity | µmhos/cm | 1000 |
| Boron | mg/L | 1.0 |
| Chloride | mg/L | 200 |

2. As part of the Fourth Quarter Monitoring Report required in the MRP, the Discharger shall evaluate the Facility's compliance with the Salinity Action Level. If the blended wastewater exceeds the Salinity Action Levels, the Discharger shall submit a Salinity Action Level Report **by 1 March** of the year following the exceedance of the Salinity Action Level(s). The Salinity Action Levels Report shall, at a minimum, include the following:

   a. An evaluation of the Facility's salinity effluent levels. This evaluation should include, at a minimum, a discussion of any changes to the Facility's source water, changes in chemical usage at the Facility, changes to the Facility processes, and any increased conservation efforts implemented within the Facility (with flow data demonstrating decreased flows from the Facility).

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

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

## E. Discharge Specifications

1. Waste discharges shall remain within authorized Lerdo Canal, Rosedale Spreading Basin, and/or the Districts agricultural land application areas and authorized waste treatment and/or containment structures.

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 property at an intensity that creates or threatens to create nuisance conditions.

5. 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.

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. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

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

8. The Discharger shall monitor residual solids accumulation in the Oxidation Ditch annually and shall periodically remove residual solids as necessary to maintain adequate storage capacity.

9. The Discharger shall regularly inspect the liner condition of the Oxidation Ditch. 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.

10. The Facility's discharge to Lerdo Canal shall not impact the Lerdo Canal's agricultural supply beneficial use.

## 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. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity.

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

## 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 Executive Officer 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 Discharger shall comply with the separately issued Monitoring and Reporting Program (MRP) R5-2022-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.

2. A copy of this Order (including Information Sheet, Attachments and SPRRs) and the MRP, shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with their contents.

3. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034 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 <90 days after permit adoption>,** Califia shall submit a work plan to collect sufficient nitrogen data (i.e., nitrate, TKN, and total nitrogen,) to evaluate the impacts the Facility's discharge has on the Lerdo Canal and Rosedale Spreading Basins. Adequate information (e.g., source water data, upstream, downstream, etc.) to determine the appropriate Pathway the Discharger will pursue for the Nitrate Control Program. The work plan shall include a plan, at a minimum, to monitor and characterize nitrogen concentrations within the Lerdo Canal and Rosedale Spreading Basins. A final report shall be submitted by **3 July 2023**, or by the deadline to submit a Notice of Intent established in a Nitrate Control Program Notice to Comply Letter (once one is issued for the Facility), whichever comes first.

6. 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.

7. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by 31 January.

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 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.

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

11. As described in the 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.

12. In the event of any change in control or ownership of the WWTF, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

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

14. 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)

## ATTACHMENTS

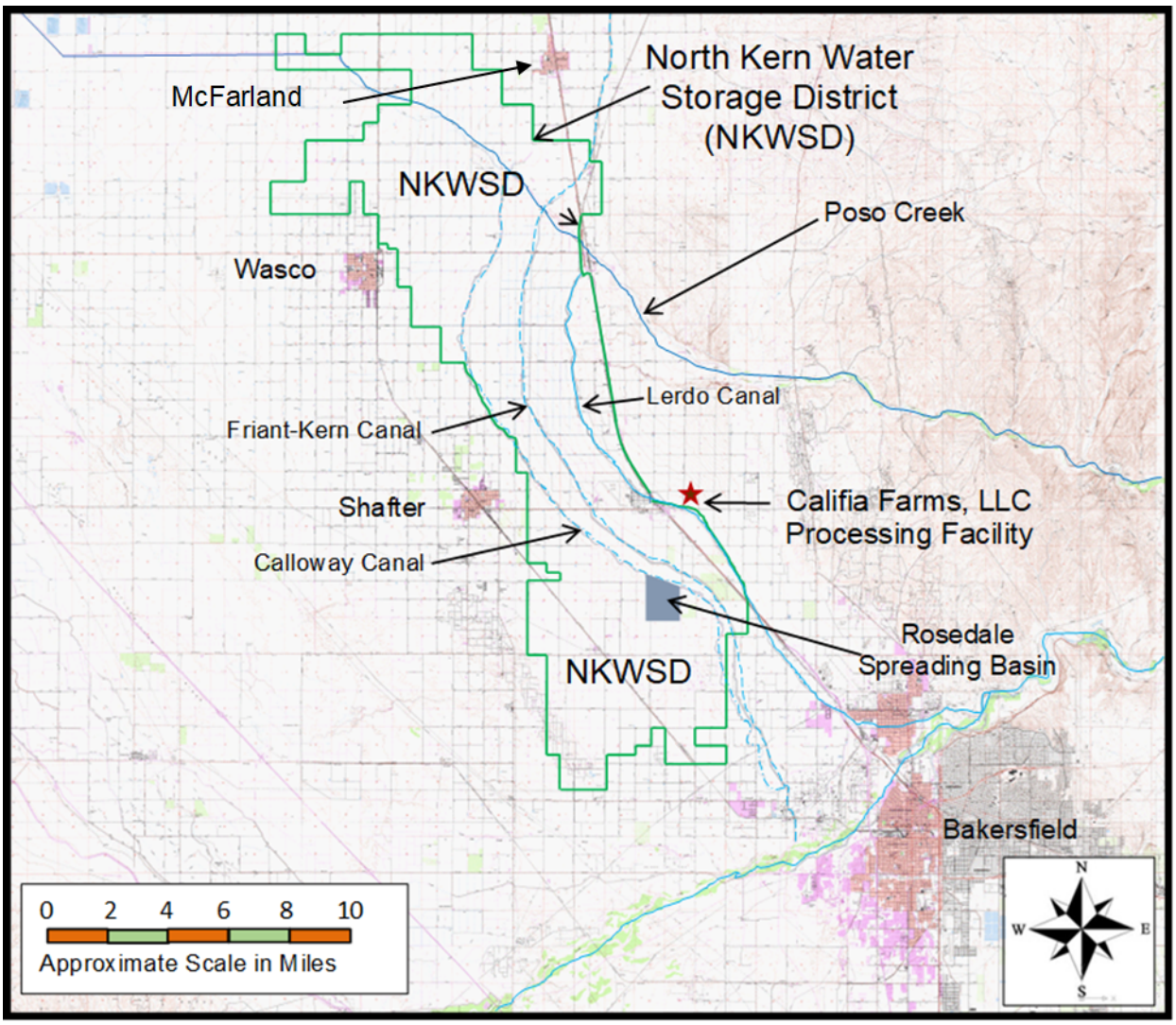
**Attachment A —Project Location** Map
**Attachment B —Facility** Map
**Attachment C —Rosedale Spreading Basin** Map
**Attachment D – Califia Facility Flow Schematic**
**Attachment E—Lerdo Canal Flow Schematic**

**Standard Provisions & Reporting Requirements**

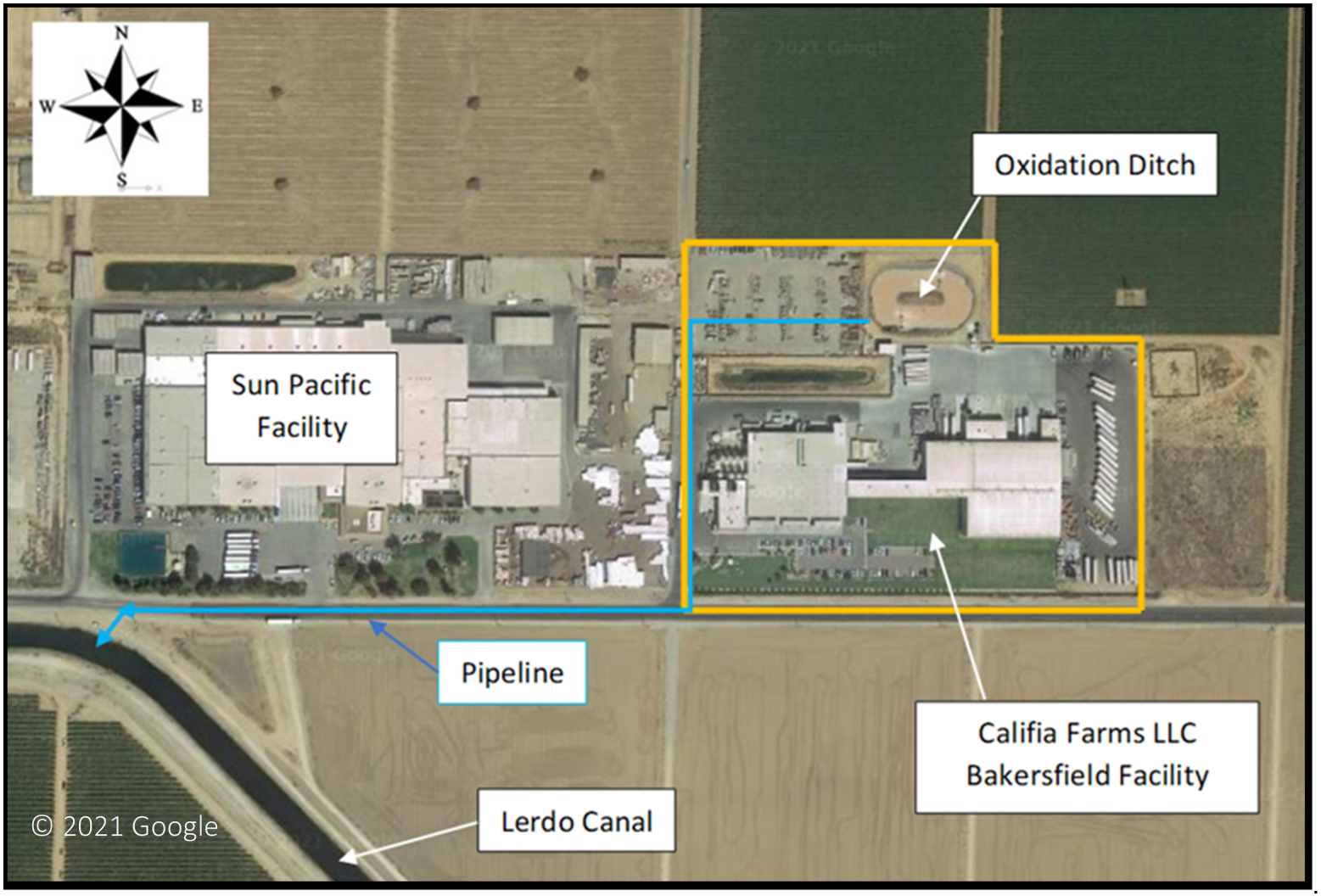
**Information Sheet**

**Monitoring and Reporting Program R5-2022-####**

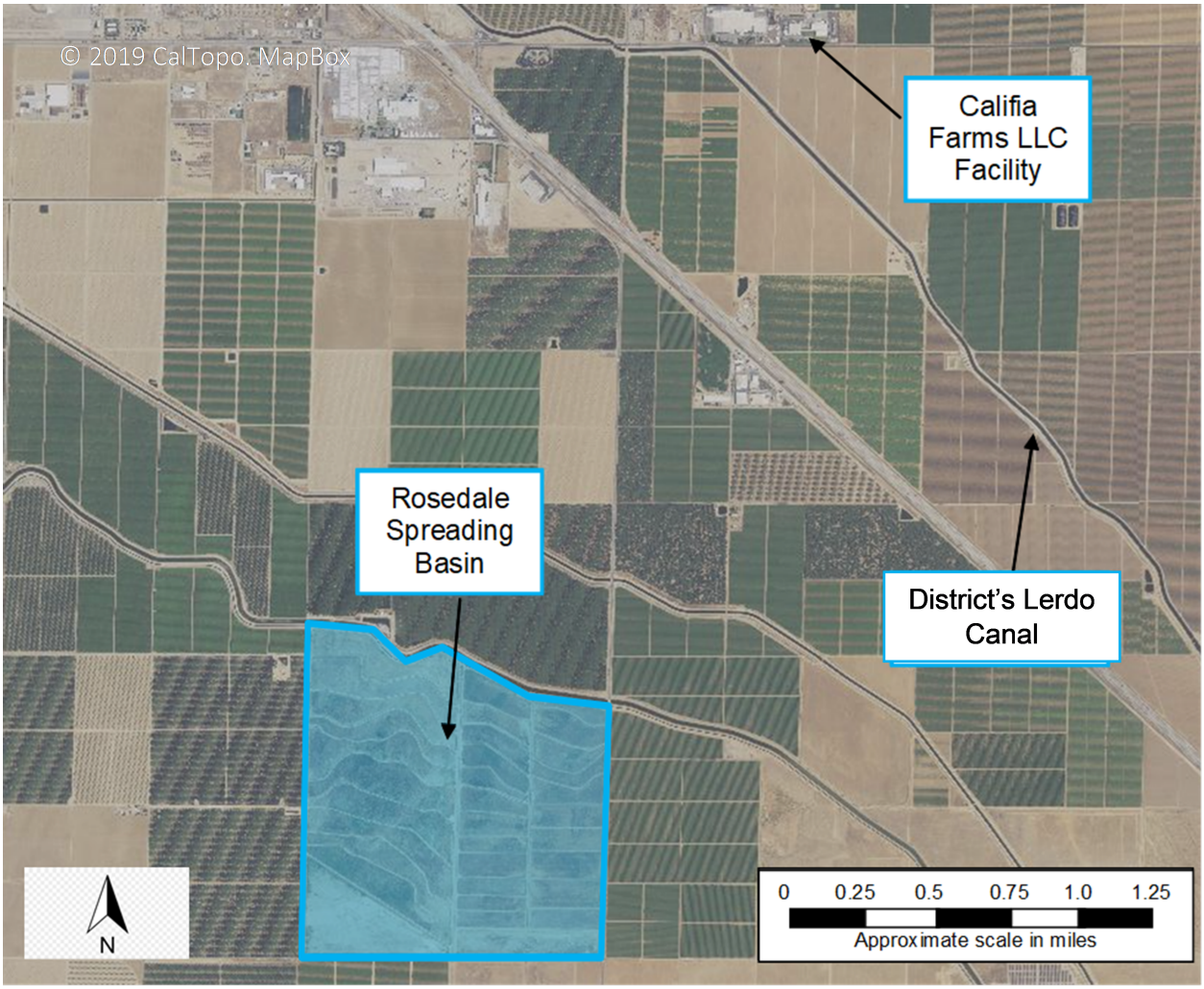
## Attachment A —Project Location Map



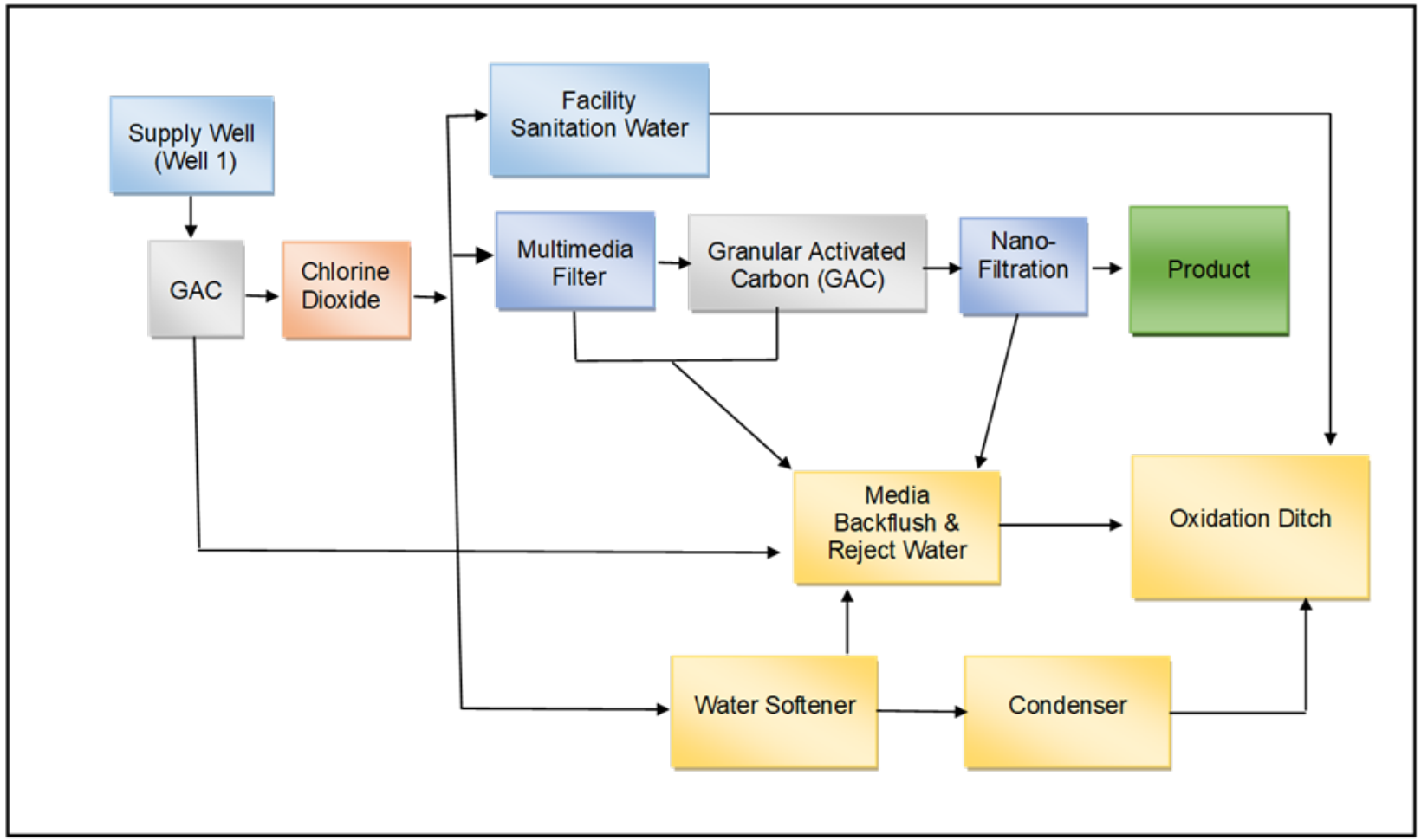
## Attachment B —Facility Map



## Attachment C —Rosedale Spreading Basin Map

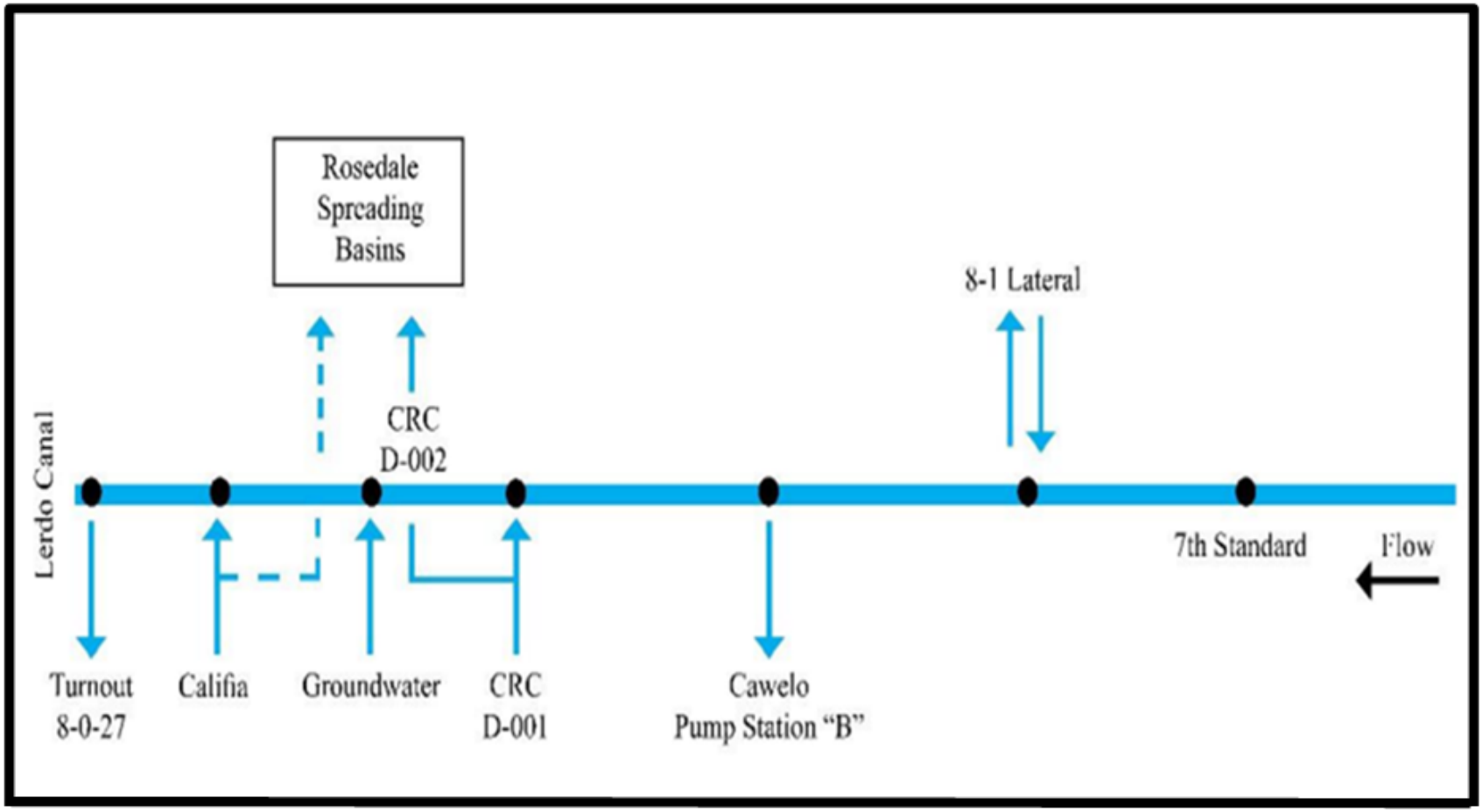


## Attachment D —Califia Facility Flow Schematic




Design Reference - Figure 3-1, 29 July 2021 revised Report of Waste Discharge, GEI Consultants, Inc.

## Attachment E—Lerdo Canal Flow Schematic




Design Reference - Figure 1 -1, 29 July 2021 revised Report of Waste Discharge, GEI Consultants, Inc.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-####
FOR
CALIFIA FARMS, LLC, NORTH KERN WATER STORAGE DISTRICT, AND
PARAMOUNT RANCH L.P.
CALIFIA FARMS BAKERSFIELD FACILITY
KERN COUNTY

# INFORMATION SHEET

## BACKGROUND

Califia Farms, LLC (Califia) manufactures specialty drink products at its Bakersfield Processing Facility (Facility) located north of Bakersfield in Kern County. The Facility is on land owned by Paramount Ranch L.P. The North Kern Water Storage District (District) encompasses a broad area of approximately 60,000 acres in Kern County, northwest of Bakersfield, east of Shafter and Wasco, and west of McFarland. The District owns and operates the Lerdo Canal, which is used to distribute irrigation water within the District boundaries. This Order collectively names Califia, the District, and Paramount Ranch as Discharger(s).

Califia began operations in the area in 2011 and previously discharged their process wastewater to about 525 acres of cropland owned by the adjacent Sun Pacific Shippers under Waste Discharge Requirements (WDRs) Order 96-169. In 2017, Califia partnered with the District to discharge up to 0.15 mgd of Califia's process wastewater to the District's Lerdo Canal to supplement the District's irrigation supplies under WDRs Order R5-2017-0019.

On 22 April 2021, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Report of Waste Discharge (RWD), prepared by GEI Consultants, Inc., (GEI), on behalf of Califia and the District, for a flow increase from 0.15 mgd to 0.5 mgd. In response to Central Valley Water Board staff's review of the RWD, the Discharger submitted a revised RWD on
29 July 2021 (2021 RWD).

## WASTEWATER GENERATION AND DISPOSAL

Wastewater generated at the Facility is primarily (93%) sanitation wash water used to sanitize and sterilize processing equipment. The other waste streams come from the Facility's water treatment system used to treat the incoming source water. Process wastewater is discharged to a lined oxidation ditch with an operational capacity of 600,000 gallons (0.6 million gallons) and then to the Lerdo Canal via pipeline.

The Lerdo Canal is used to supply irrigation water to crops grown within the District's boundaries. Water volumes fluctuate based on available water supplies and irrigation demand. The 2021 RWD indicates that on average in 2020 the Lerdo Canal moved about 109 cubic feet per second (CFS) or about 70 mgd as measured at Station B on

the Lerdo Canal. The 2021 RWD indicated the average flow of all water sources in the Lerdo Canal in 2020 was about 125 CFS or about 81 mgd. Califia's proposed discharge of 0.5 mgd equals about 0.8 CFS, which constitutes about 0.7 percent (less than 1 percent) of the 109 CFS average flow in the Lerdo Canal, and about 0.6 percent of the flow at 125 CFS.

During the irrigation season, approximately March through November, most of the water in the Lerdo Canal is used for irrigation of crops grown in the District. During the non-irrigation season (typically December through February) and during an annual maintenance shutdown typically conducted in January, the various waters including the Facility's discharge are sent to the Rosedale Spreading Basin for groundwater recharge. Depending on where canal maintenance is needed, Califia's wastewater may need to be trucked to the Rosedale Spreading Basins for up to two weeks (14 days). The Dischargers have since coordinated maintenance schedules to minimize potential disruptions. During the shutdown, Califia performs required maintenance to the Facility that reduces wastewater production until the discharge to the canal can resume. According to the Dischargers, if the Facility's wastewater needs to be trucked to the Rosedale Spreading Basins, the wastewater would at a minimum be mixed with oil field produced groundwater and regional groundwater sources before being discharged into the basin.

The discharge was generally in compliance with the 0.15 mgd flow limit of WDRs Order R5-2017-0019 until mid-2018 but has exceeded the flow limit since August 2018. For 2021, the Facility's average flow was 0.217 mgd with a maximum daily flow of 0.547 mgd in March 2021.

Califia has improved the salinity of its discharge since 2017 by implementing several changes to its operations including installing a new supply well, changing the chemical cleansers and disinfectants used at the Facility, and replacing the reverse osmosis system with a nanofiltration system. The average EC of the discharge decreased from about 2,500 µmhos/cm in 2017 to about 1,200 µmhos/cm in December 2021.

The discharge from Califia by itself contains salts, primarily EC and TDS, at concentrations above the applicable water quality objectives and/or background groundwater quality. However, Califia's discharge is blended with the other water sources contained within the Ledo Canal and makes up less than 1 percent of the total water budget for the Lerdo Canal. The 2021 RWD used a model to determine the estimated water quality in the Lerdo Canal with the increased Facility discharge. The estimated results from the model indicate little to no change in EC and chloride concentrations. This Order requires sampling of the Lerdo Canal waters to provide actual water quality results.

Nitrogen data for the effluent is available and indicates nitrate as nitrogen is not detected above the practical quantitation limit of 0.5 mg/L and total nitrogen averaged 28 mg/L in 2021. As above for salinity, this Order requires sampling of the Lerdo Canal

waters to provide results for nitrate as nitrogen and total nitrogen to assess the nitrogen content of the blended waters in the Lerdo Canal.

The oxidation ditch is lined with a 60-mil high-density polyethylene (HDPE) liner installed in 2013 and has a total capacity of 700,000 gallons and an operational capacity of 600,000 gallons to comply with the two-foot freeboard requirement of WDRs Order R5-2017-0019. The existing oxidation ditch has the capacity to accept the proposed increase in flow from 0.15 mgd to 0.5 mgd.

Califia received a Salt Control Program Notice to Comply on 5 January 2021 and has selected Path B or the Alternative Option. For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-22.14 Northeastern Kern County, a Priority 2 Basin. Notices to Comply for Priority 2 Basins have not yet been issued but are expected in 2022. Califia has yet to select a path for the Nitrate Control Program due to the lack of sufficient data to appropriately assess potential nitrogen impacts to groundwater. This Order contains Provision H.5, which requires Califia to gather sufficient data to allow them to make an informed decision on what Pathway they intend to pursue for the Nitrate Control Program.

## GROUNDWATER CONSIDERATIONS

Groundwater conditions are discussed in Findings 40 to 47 of the Order.

## ANTIDEGRADATION

Antidegradation analysis and conclusions are discussed in Findings 65 to 71 of the Order

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

The Order sets a maximum daily average flow limit of 0.5 mgd for the Facility's discharge to the Lerdo Canal via pipeline. The Order also specifies Salinity Action Levels as part of the Prioritization and Optimization Plan since the Discharger selected to participate in the Prioritization and Optimization Plan for the Salt 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 civil administrative liability where appropriate. The Order includes influent, effluent, solids, and water supply 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 the Salt Control Program, a Notice to Comply for the Salt Control Program was issued to Califia Farms (CV-SALTS ID 2884) on 11 March 2021. On 28 June 2021, the Discharger submitted the required fee payment to comply with the Salt Control Program by joining the P&O Study.

For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-22.14 (Northeastern Kern County), a Priority 2 Basin. Dischargers in Priority 2 Basins will receive a Notice to Comply for the Nitrate Control Program between 2022 and 2024. The July 2021 RWD states Califia has yet to select a path for the Nitrate Control Program due to the lack of sufficient data to appropriately assess potential nitrogen impacts to groundwater. This Order contains Provision H.5 requiring Califia to decide on what Pathway they intend to pursue for the Nitrate Control Program.

## REOPENER

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

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

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