

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

ORDER R5-2017-0023

WASTE DISCHARGE REQUIREMENTS

FOR
PACIFIC COAST PRODUCERS INC.
OROVILLE PROCESSING FACILITY AND PALERMO LAND APPLICATION AREA
BUTTE COUNTY

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

1. Pacific Coast Producers Inc. (hereafter "Discharger") owns and operates a fruit processing facility (Cannery) in Oroville that generates process wastewater that is discharged to land owned by the Discharger south of Oroville in Palermo, Butte County. The Discharger is responsible for ensuring compliance with Waste Discharge Requirements (WDRs).
2. On 28 April 2016 the Discharger submitted a Report of Waste Discharge (ROWD) that describes expansion of its existing land application area for fruit processing wastewater and residual solids that are currently discharged to land in Palermo. The expansion area consists of approximately 100 acres within the adjacent Pheasant Club owned by the Discharger. The original 28 April 2016 ROWD was deemed incomplete. However, additional information needed to complete the ROWD was submitted, and the ROWD was deemed complete on 30 August 2016.
3. The Cannery is located at 1601 Mitchel Avenue in Oroville (Section 17, Township 19 North, Range 4 East, Oroville Quadrangle). The Cannery occupies Assessor's Parcel Number (APN) 035-450-018, as shown on Attachment A, which is attached hereto and made part of this Order by reference. The land application area is located 6.5 miles south of the Cannery in Palermo in Sections 17, 20, and 29, Township 18 North, Range 4 East, Palermo Quadrangle. The current land application area occupies APN 027-200-075. The additional land application expansion area occupies APNs 027-200-028, 027-200-040, 027-200-041, 027-200-042, and 027-200-044.
4. WDRs Order R5-2003-0045, adopted by the Central Valley Water Board on 14 March 2003, prescribes requirements for the discharge of fruit processing wastewater from its Cannery in Oroville to a land application area near Palermo. Order R5-2003-0045 allows a monthly average wastewater flow of up to 650,000 gallons per day (gpd) from 1 October to 15 November, 250,000 gpd from 16 November to 30 June, and three (3) million gallons per day (MGD) from 1 July to 30 September. The Discharger proposes to expand the land application area and maintain current discharge rates. Due to the expanded land application area, Order R5-2003-0045 does not reflect the proposed operations and will be rescinded.

Existing Facility and Discharge

5. The Discharger produces canned fruit, including peaches, pears, and fruit cocktail (mixed fruit in single serve plastic bowls, with fruit and syrup or fruit and gel combinations).
6. Process wastewater is generated during fruit washing, equipment sanitation, and product transfers within the processing facility (via flumes and pumps). Solids are removed from the

process wastewater by a screen prior to being discharged to a sump and ultimately the conveyance pipe-line. During maintenance, process wastewater is discharged to the emergency pond at the Cannery. Effluent samples are collected by a composite sampler located at the sump. Screened solids are used as soil amendments at the Palermo land application area.

7. Process wastewater and some storm water from the Cannery are transported from the Cannery to the land application area in Palermo by means of a 6 ½ mile pipeline. For final disposal, the process wastewater and storm water is applied to approximately 309 acres of the 369-acre land application area, which consists of 10 fields, and three un-lined ponds. Of the three ponds, one pond receives wastewater during processing, the second is an emergency storage pond, and the third pond receives fresh water only. Wastewater is either applied by flood or spray irrigation. Limited irrigation has historically been performed in the Pheasant Club, located on the adjacent 401-acre parcel also owned by the Discharger.
8. The Oroville Cannery encompasses 21 acres, all of which are owned by the Discharger. The Cannery consists of a covered production plant, several warehouses, and a 65,000-gallon emergency pond.
9. Water is supplied to the Cannery processing facility by California Water Service Company. Domestic wastewater is discharged to the Sewerage Commission – Oroville Region Wastewater Treatment Plant.
10. Approximately 75 percent of the Cannery facility is covered by pavement or buildings. Approximately 20 percent of the storm water generated is discharged off-site to municipal storm water drains. The remainder of the storm water generated at the processing facility is routed to the conveyance pipeline to the land application area in Palermo for disposal with process wastewater from Cannery operations.
11. The current land application area is divided into ten fields, separated by levees, dikes, and roads, and plumbed together through a series of gates, culverts, and pumps. Various crops are grown in each field, including wetland vegetation, grasses, and forage crops. Irrigation methods also vary in each field, which include wheel line sprinkling, flood irrigation, and traveling gun sprinkling. During dry periods, when significant precipitation is not forecasted, process wastewater is applied to fields 0 through 4 (approximately 129 acres). During rainy periods, all process wastewater is applied to Fields 5A, 5B, 6, 7A, and 8 (approximately 158 acres), which are not located in the 100-year floodplain. A 2.5 million gallon emergency storage pond is located in Field 9. The storage pond is used to manage storm water runoff from Fields 5A, 5B, 6, 7A, and 8, and to hold process wastewater during periods of heavy rainfall.
12. Caustic peeling (lye) which is utilized for peaches and pears at the Cannery has been a primary contributor to salinity and sodium levels in effluent. In 2014 the facility switched from sodium hydroxide to potassium hydroxide which has reduced the sodium loading but increased potassium loading.
13. Water softening agent use at the Cannery is estimated at 11,000 lbs. of salt per year. The Cannery continually monitors softeners to ensure that they are in good operating condition to run as efficiently as possible.
14. Various chemicals are used for good manufacturing procedures and food safety including hydrochloric acid and sodium hypochlorite, which adds up to about 6,000 gallons of process

wastewater per year. It is estimated that these chemicals add 11,000 lbs. of salts per year to process wastewater.

15. A summary of the process wastewater characteristics based on monitoring data from 2011-2015 is provided in Table 1. Wastewater samples are obtained after solids screening.

Table 1. PCP Average Industrial Process Wastewater Characteristics from 2011-2015

Constituent	Units	Average	Range
Biological Oxygen Demand (5-day) (BOD)	mg/L	3156	55-6800
Chemical Oxygen Demand (COD)	mg/L	4000	710-8650
Electrical Conductivity (EC)	µmhos/cm	864	342-1635
Fixed Dissolved Solids (FDS)	mg/L	535	145-1395
Nitrate as N (NO ₃ -N)	mg/L	0.25	0.05-1.05
pH	S.U.	6.3	4.5-8.7
Total Dissolved Solids (TDS)	mg/L	1978	370-5063
Total Kjeldahl Nitrogen (TKN)	mg/L	9.2	1-36
Total Suspended Solids (TSS)	mg/L	437	25-4530

Compliance History

16. The facility has generally been in compliance with Waste Discharge Requirements Order R5-2003-0045. On 13 August 2011 a leak in the conveyance pipeline was detected and repaired. An estimated 10,800 to 24,000 gallons of industrial process wastewater was released due to the leak. Additional conveyance pipeline breaks and leaks have occurred since 1998, but since this time, the entire 6.5 miles of pipeline have been replaced.

Planned Changes in the Facility and Discharge

17. The Discharger is planning to expand the land application area to include additional parcels within the adjacent Pheasant Club. The additional land application area includes two additional fields, Field 10 and Field 12, which totals approximately 100 acres. The quantity of process wastewater applied to land will remain at current rates; therefore the expansion to 409 acres will reduce overall constituent areal loading rates.
18. The current site has 309 acres of irrigable land with a loading capacity of 330 lbs./acre/year of total nitrogen. The proposed expansion would add 100 acres of irrigable land with a similar nitrogen loading capacity. The expansion to 409 irrigable acres would reduce the areal loading rates of all the constituents of concern. The current and anticipated loading rates are further discussed in Finding 58.

Site-Specific Conditions

19. Irrigated crops on the Pheasant Club site include pasture grass and other forage grasses. Milo is planted in several of the land application fields. Test crops are planted in various fields and include: turnips, winter peas, fava beans, narrow leaf birds foot trefoil, and bolta clover. These test crops are analyzed in conjunction with faculty from California State University, Chico for impacts of process water on the crop.
20. The land application area is generally flat. The surface soils at the land application area are approximately one foot deep and have been classified as primarily Perkins Gravelly Loam (Fields 0-4) and Kimball Loam (Fields 5 to 8). Beneath the topsoil is a discontinuous semi-consolidated to consolidated hardpan. Percolation rates range from 0 to 7.5 in/hr with an area-weighted mean of 2.44 in/hr.
21. The land application area is bordered by the South Feather Water and Power District canal along the southeast corner, Wyandotte Creek along the south, and an irrigation ditch along the west. The canal and ditch drain to Wyandotte Creek. During the rainy season, storm water runoff from the land application area drains to the irrigation ditch located along the western boundary. Gate valves control discharge to the western irrigation ditch, and the Discharger manages the gate valves to prevent the discharge of storm water that has commingled with process wastewater.
22. The emergency storage pond volume at the Cannery is 65,000 gallons. Fields 0 to 9 comprise the current land application area. Fields 10 and 12 include the additional land application area expansion. The field acreage is stated in the following table.

Table 2. Palermo Land Application Area Field Acreage

Field	0	1	2a	2b	3	4	5a	5b	6	7a	7b	8	9	10 ¹	12
Acreage	6	8.9	9.4	14.2	26.1	64.1	8.4	40.6	54.3	14.9	3.6	43.5	14.7	85.0	15.0

¹ Field 11 does not receive process wastewater flow.

23. Average monthly process wastewater flow rates from 2011-2015 are listed in the table below.

Table 3. 2011-2015 Average Monthly Process Wastewater Flow

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flow, MG	0.42	0.68	1.34	0.38	0.36	1.3	25.3	56.16	33.9	12.2	0.54	0.16

Groundwater Conditions

24. Groundwater is monitored on a semi-annual basis in wells MW-1, MW-2, MW-3, MW-4, and MW-H. Groundwater is first identified, in these wells, approximately 20 to 30 feet below ground surface (bgs). The wells are located throughout the land application area as shown in Attachment B. Groundwater elevations show that monitoring well MW-1 is hydraulically upgradient. However, the most downgradient monitoring well cannot be determined due to varying groundwater elevations each year.

25. Concentrations of some monitored constituents, including chemical oxygen demand and nitrate, are greater in some downgradient monitoring wells when compared to the upgradient monitoring well MW-1. Twice in MW-3, nitrate concentrations in groundwater have been measured above the State and Federal Primary Maximum Contaminant Level (MCL) of 10 mg/L (NO₃ as N), once in 2007 and once in 2008. However, the levels have not been consistent and may be reflective of regional influences. Average groundwater concentrations from 2004-2015 do not exceed MCLs and are shown in Table 4.

Table 4. Average Groundwater Quality from 2004-2015

Constituent	Units	MW-1 ²	MW-2	MW-3	MW-4	MW-H	MCL
COD ¹	mg/L	3.4	3.7	3.9 ⁶	2.7	4.5	-
EC	µmhos/cm	426	140	363	490	705	700 ³ , 900 ⁴
FDS	mg/L	264	126	223	282	381	-
NO ₃ -N ¹	mg/L	0.6	1.7	3.7	1.3	2.5	10 ⁵
pH	S.U.	7.0	7.7	6.7	7.0	6.9	6.5-8.5 ⁴
TDS	mg/L	304	146	259	309	470	450 ³ , 500 ⁴
TKN ¹	mg/L	0.92	1.06	0.98	0.93	0.95	-

¹ For statistical calculations, non-detects were set equal to the reporting limit. The reporting limits of 20 mg/L COD reported in 2006 and 2008, and 5 mg/L TKN reported in 2014 were dismissed as outliers.

² Upgradient Well

³ Agricultural Water Quality Goal

⁴ Secondary Maximum Contaminant Level

⁵ Primary Maximum Contaminant Level

⁶ 50 mg/L COD reported in MW-3 in 2008 was dismissed as an outlier.

26. In the past, additional monitoring wells were part of the monitoring well network. The 1993 technical report, *Summary of Soil Logging and Groundwater Quality*, reports that former monitoring wells A through C, and F were installed in 1974, but information regarding the well construction is not available. These wells are reportedly 10 feet deep. In November 1987, wells D and E were installed to 38 and 41 feet bgs with 4-inch PVC casing. In June 1994, monitoring wells G and H were installed to 40 feet deep, and are constructed using 2-inch diameter PVC casing. Four additional monitoring wells (MW-1 through MW-4) were constructed within the land application area in May 2003, at depths of 43 feet, 40 feet, 32 feet, and 40 feet respectively. Depth to groundwater ranged from 15 to 40 feet below ground surface (99 to 110 feet MSL). The additional wells were installed in response to a directive from the Central Valley Water Board to characterize groundwater and determine groundwater quality upgradient and downgradient of the land application area. The Central Valley Water Board was specifically concerned about increased concentrations of nitrate and dissolved salts. Monitoring wells A-G are not considered representative of overall groundwater conditions due to their shallow

construction and the possibility of direct influence by the adjacent ponds. Monitoring wells D, E, and G have been decommissioned.

27. Intra-well analysis of groundwater quality is used to evaluate long-term water quality impacts because of the underlying geology, consisting of discontinuous sedimentary deposits and highly variable groundwater levels and quality.
28. In 2005 and 2006, intra-well tolerance limits were developed for monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-H in accordance with the recommendations included in the *Background Groundwater Quality* Report, prepared by North State Environmental in October 2004. These intra-well tolerance limits have been updated biennially since 2009. The intra-well tolerance limits are statistically derived using the intra-well upper threshold limit (UTL) method and the statistical software package Sanitas® which uses a 95 percent upper tolerance coefficient. In addition, groundwater data is also evaluated using the Sen's Slope and Mann-Kendall statistical methods which are used in combination with the tolerance limits to conduct trend analyses and determine if water quality is changing over time.
29. Statistically significant increasing trends have been observed for EC in MW-3 and nitrate in MW-1. It should be noted that MW-1 is the upgradient well; therefore, the increasing nitrate concentrations in this well are unlikely to be associated with site operations. Although EC concentrations in MW-3 are statistically increasing, annual average EC concentrations have been below the groundwater tolerance limits since 2013.

Basin Plan, Beneficial Uses, and Regulatory Considerations

30. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
31. Local drainage is to Wyandotte Creek, which drains into North Honcut Creek, which drains to Honcut Creek, a tributary to the Feather River below Lake Oroville. The beneficial uses of the Feather River as stated in the Basin Plan (Table II-1) include: municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; non-contact water recreation; aquaculture; warm freshwater habitat; cold freshwater habitat; wildlife habitat; migration of aquatic organisms; spawning, reproduction, and/or early development.
32. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.
33. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater.
34. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN designated groundwater.
35. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter 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.

36. The narrative Basin Plan toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
37. Quantifying a narrative water quality objective 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 in order to implement the narrative objective.
38. 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 for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC 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 waters having 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.

Waste Discharge Considerations

39. For the purpose of this Order, saline waste is defined as wastewater that contains high concentrations of fixed dissolved solids (FDS), which can also be expressed as inorganic dissolved solids (IDS). Because salts occur naturally in all waters, and because the naturally occurring salt concentrations vary depending on the water supply, it is not practical to define saline waste region-wide as that which exceeds a certain FDS concentration. Generally speaking, saline waste is that for which the FDS concentration is more than 300 mg/L higher than the TDS concentration of the water supply. Although there are many individual ions that can impact the beneficial uses of groundwater, nitrate, sodium, and chloride are the predominant salts of concern in the Central Valley Region.
40. Many surface waters and local groundwater supplies have been degraded with salt. In some areas, the high salinity is naturally occurring, but in many areas it is due to the acts of man. In 2006, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. Until the program culminates in Basin Plan amendments that address the region-wide salinity issues, it is not reasonable to require dischargers to take extraordinary measures to eliminate salt from wastes discharged to land. However, the Board expects that all regulated dischargers will make a concerted effort to reduce salinity through source control, containment, and conventional treatment to the maximum practical extent.
41. For the purpose of this Order, high strength waste is defined as wastewater that contains concentrations of readily degradable organic matter that exceeds typical concentrations for

domestic sewage. Such wastes contain greater than 500 mg/L BOD and often contain commensurately high levels of total Kjeldahl nitrogen (TKN), which is a measure of organic nitrogen and ammonia nitrogen. Typical high strength wastewaters include septage, some food processing wastes, winery wastes, and rendering plant wastes.

42. Excessive application of high strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices which include planting crops to take up plant nutrients and maximizing oxidation of BOD to prevent nuisance conditions.
43. Unless groundwater is very shallow, groundwater degradation with nitrogen species such as ammonia and nitrate can be prevented by minimizing percolation below the root zone of the crops and ensuring that the total nitrogen load does not exceed crop needs over the course of a typical year. Where there is sufficient unsaturated soil in the vadose zone, excess nitrogen can be mineralized and denitrified by soil microorganisms.
44. With regard to BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly-breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions. Reducing conditions convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.
45. Typically, irrigation with high strength wastewater results in high BOD loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.
46. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency, cites BOD loading rates in the range of 36 to 600 lbs./acre/day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that supported this report did not evaluate actual or potential groundwater degradation associated with those rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have been done are not readily adapted to the varying soil, groundwater, and climate conditions that are prevalent throughout the region.
47. The California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water* proposes risk categories associated with particular BOD loading rate ranges as follows:

Table 5. Organic Loading Rate Risk Categories

Risk Category ¹	Average ² BOD5 Loading Rate (lb/acre/day)	Depth to Groundwater ³ (feet)	Notes
1	≤ 50 ⁴	> 5	Indistinguishable from good farming operations with good distribution important.
2	≤ 100 ⁴	> 5	Minimal risk of unreasonable groundwater degradation with good distribution more important.
3	> 100 ⁴	> 2	Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.

¹ Both loading rate and depth-to-groundwater conditions should be met to qualify for a particular category

² Cycle Averages

³ Depth to groundwater is measured from the soil surface and should be calculated as the average during the application season.

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

49. Although it has not been subject to a scientific peer review process, the *Manual of Good Practice* provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals.

50. The Central Valley Water Board considers this operation to be a Risk Category 2 as outlined in the *Manual of Good Practice* for discharges using sprinkler and flood irrigation application to land with well drained soils. The annual average BOD loading rate from 2011 to 2015 was 42 lbs./acre/day.

Antidegradation Analysis

51. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:

- a. The degradation is consistent with the maximum benefit to the people of the state.
- b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
- c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and

- d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.
52. Degradation of groundwater by some of the typical waste constituents associated with discharges from fruit processing wastewater, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The Discharger's operation provides 180 full time jobs and supports approximately 1,400 seasonal employment positions. Total payroll for the Cannery and land application area contribute over \$13 million to the Butte County economy. The economic prosperity of small communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.
53. The Discharger has been monitoring groundwater quality at the site since 1997. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on existing background groundwater quality.
54. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), nutrients, and organic loading.
55. For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality; crop uptake, and the ability of the vadose zone below the Land Application Areas (LAAs) to support nitrification and denitrification to convert the nitrogen to nitrogen gas before it reaches the water table. Most of the nitrogen in the process wastewater is present as TKN, which can readily mineralize and convert to nitrate (with some loss via ammonia volatilization) in the LAAs. Background groundwater quality is poor with respect to nitrogen and although on average is below the primary MCL of 10 mg/L, has historically exceeded 10 mg/L in background monitoring wells. The poor quality background groundwater is likely due to the predominantly agricultural land use in the area. Nitrate concentrations in groundwater downgradient of the current unlined ponds and LAAs are also below the primary MCL. The expanded LAA system will maximize nitrogen uptake by crops and minimize the potential for nitrate to migrate to groundwater. Therefore, this Order requires that nutrients associated with the wastewater and other sources be applied to the LAAs at rates consistent with crop demand, and the Groundwater Limitations require that the discharge not cause the exceedance of any water quality objective.
56. This Order establishes effluent and groundwater limitations for the facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. For electrical conductivity, chemical oxygen demand, nitrate as N, total Kjeldahl nitrogen, fixed dissolved solids, and pH, current groundwater monitoring data indicates that groundwater has not been degraded beyond water quality objective by the previous discharge and that the expanded discharge does not pose a threat of increased degradation in the future.
57. In April 2004, the Discharger submitted a Best Practicable Treatment or Control (BPTC) report, in which sources of salinity were evaluated and recommendations for salinity control and management practices were provided. To minimize salinity impacts the Discharger provides treatment and control of the discharge, and most recently the following improvements were implemented:

- An ongoing program to reduce lye usage and BOD in process wastewater discharge, and have since switched from sodium hydroxide to potassium hydroxide in 2014;
- Elimination of the pumping system for grapes, thus reducing water usage and lowering sugar solids in the wastewater stream;
- A solids recovery system for the pear department which uses a micro sieve to reduce solids from the waste stream;
- Installation of an additional heat exchanger with increased pipe diameter to the peach and slurry systems to remove more particles from the wastewater stream; and
- Re-engineered the peach caustic system to remove more particles and recycle water.

58. The quantity of process wastewater applied to the land application areas will remain at current volumes; therefore the expansion of the land application areas will reduce the salts, nutrients, and organic loading rates. The current and anticipated annual average loading rates are listed in Table 6. These were calculated using the total annual constituent applications from 2011-2015.

Table 6. Current and Anticipated Loading Rates

Constituent	Annual Application (lbs./year)	Current Loading Rate ¹ (lbs./acre/year)	Expanded Loading Rate ² (lbs./acre/year)
Biological Oxygen Demand (BOD)	3,984,859	12,896	9,743
Chemical Oxygen Demand (COD)	5,139,492	16,633	12,566
Fixed Dissolved Solids (FDS)	878,085	2,842	2,147
Nitrate as N (NO ₃)	141	<1	<1
Total Dissolved Solids (TDS)	2,485,596	8,044	6,077
Total Kjeldahl Nitrogen (TKN)	13,465	44	33
Total Nitrogen (TN)	13,600	44	33
Total Suspended Solids (TSS)	764,020	2,473	1,868

¹ Loading Rate calculated using the current 309 irrigable acres.

² Loading Rate calculated using the expanded 409 irrigable acres.

59. This Order establishes terms and conditions to ensure that the discharge will not unreasonably affect present and anticipated beneficial uses of groundwater or result in groundwater quality less than that prescribed in state and regional policies. In addition, the treatment and control measures described above represent BPTC. Any limited degradation that may occur pursuant to this Order is consistent with the maximum benefit of the people of the state, as explained in Finding 52. Therefore, the degradation authorized by this Order is consistent with Resolution 68-16.

Other Regulatory Considerations

60. In compliance with 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 order promotes that policy by requiring discharges not to exceed the maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

61. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:

The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:

(b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

(1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

(f) Soil Amendments - Use of nonhazardous decomposable waste as a soil amendment pursuant to applicable best management practices, provided that RWQCBs may issue waste discharge or reclamation requirements for such use.

62. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:

a. Discharges to the process wastewater holding ponds and the LAAs are exempt pursuant to Title 27, section 20090(b) because they are discharge of wastewater to land and:

i. The Central Valley Water Board is issuing WDRs.

ii. The discharge is in compliance with the Basin Plan, and;

iii. The treated effluent discharged to the ponds does not need to be managed as hazardous waste.

b. Discharge of food processing residual solids to the LAAs is exempt pursuant to Title 27, section 20090(f) because it constitutes use of nonhazardous decomposable waste as a

soil amendment and this Order requires implementation of applicable best management practices.

63. Although the discharge is exempt from Title 27, the statistical data analysis methods of Title 27, section 20415(e) are appropriate for determining whether the discharge complies with Groundwater Limitations specified in this Order.
64. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger submitted a Notice of Intent for coverage under Order 2014-0057-DWQ, and was active on 25 June 2015.
65. Water Code section 13267(b) states:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2015-0023 are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

66. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.
67. A Negative Declaration was certified by the Central Valley Regional Water Quality Control Board on 24 February 2017 in accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Negative Declaration describes the project as the expansion, and operation of the new land application areas in the Pheasant Club.
68. The Negative Declaration evaluated the potential impacts to groundwater quality and found that compliance with WDRs will ensure that impacts to water quality would be less than significant. Compliance with this Order will mitigate or avoid significant impacts to water quality.
69. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

70. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
71. The Discharger(s) and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.
72. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order R5-2003-0045 is rescinded, and pursuant to Water Code sections 13263 and 13267, Pacific Coast Producers Inc., their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.
3. Discharge of waste classified as 'designated', as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.
5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
6. The Discharger shall not allow toxic substances to be discharged into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted.
7. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.
8. Discharge of process wastewater to a domestic wastewater treatment system (septic system) is prohibited.
9. Discharge of domestic wastewater to the process wastewater ponds, land application area or any surface waters is prohibited.
10. Discharge of process wastewater comingled with storm water off-site is prohibited.

B. Flow Limitations

11. **Effectively immediately**, the discharge of process wastewater shall not exceed the following flow limits:

Flow Measurement	Flow Limit ¹
1 July to 30 September	3 million gpd
1 October to 15 November	650,000 gpd
16 November to 30 Jun	250,000 gpd

¹ 30-day average.

C. Effluent and Mass Loading Limitations

1. The blend of treated wastewater, storm water, and supplemental irrigation water applied to the LAAs shall not exceed the following effluent and mass loading limits:

Constituent	Units	Limit
BOD Mass Loading	lbs./acre/day	150 ¹
Average FDS Concentration ²	mg/L	576 ³ or re-calculated for crop demand
Total Nitrogen Mass Loading	lbs./acre/year	330 ⁴

¹ The Central Valley Water Board considers this operation to be in organic loading Risk Category 2 (BOD5 ≤ 100 lbs./acre/day) as outlined in the California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water*. However, the *Manual of Good Practice* recommends allowing a 50 percent increase in the BOD loading rates in cases where sprinkler irrigation is used.

² Flow-weighted average based on total flow and concentration for each discharge source.

³ 576 mg/L FDS is nominally equivalent to the EC secondary maximum contaminant level of 900 µmhos/cm. It is generally more convenient to calculate salinity on a concentration basis (mg/L) rather than on an EC basis for compatibility with the units of mass uptake of salt by the crop (*Manual of Good Practice*, 2007).

⁴ Based on the nitrogen loading capacity of the LAA as described in the 2004 *Nutrient Loading Assessment Report*.

2. Compliance with the above requirements shall be determined as specified below:

a. The mass of BOD applied to each LAA on a daily basis shall be calculated using the following formula:

$$M = \frac{8.345(CV)}{AT}$$

Where:

- M = mass of BOD applied to an LAA in lbs./acre/day
- C = concentration of BOD in mg/L based on most recent monitoring result (3-week running average)
- V = total volume of wastewater applied to the LAA during the irrigation cycle, in millions of gallons per day
- A = area of the LAA irrigated in acres
- T = irrigation cycle length in days (from the first day water was applied to the last day of the drying time)
- 8.345 = unit conversion factor

- b. The mass of total nitrogen applied to each LAA on an annual basis shall be calculated using the following formula and compared to published crop demand for the crops actually grown:

$$M = \sum_{i=1}^{12} \frac{(8.345(C_i V_i) + M_x)}{A}$$

Where:

- M = mass of nitrogen applied to LAA in lbs./acre/year
- C_i = monthly average concentration of total nitrogen for month i in mg/L
- V_i = volume of wastewater applied to the LAA during calendar month i in million gallons
- A = area of the LAA irrigated in acres
- i = number of the month (e.g., January = 1, February = 2, etc.)
- M_x = nitrogen mass from other sources (e.g., fertilizer and compost) in pounds
- 8.345 = unit conversion factor

- c. The flow-weighted average annual FDS concentration shall be calculated using the following formula:

$$C_a = \frac{\sum_{i=1}^{12} [(C_{Pi} \times V_{Pi}) + (C_{Si} \times V_{Si})]}{\sum_{i=1}^{12} (V_{Pi} + V_{Si})}$$

Where:

- C_a = flow-weighted average annual FDS concentration in mg/L
- i = number of the month (e.g., January = 1, February = 2, etc.)
- C_{Pi} = monthly average process wastewater FDS concentration for

- C_{si} = calendar month i in mg/L
monthly average supplemental irrigation water FDS concentration for calendar month i in mg/L (considering each supplemental source separately)
- V_{pi} = volume of process wastewater applied to LAAs during calendar month i in million gallons
- V_{si} = volume of supplemental irrigation water applied to LAAs during calendar month i in million gallons (considering each supplemental source separately)

D. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.
2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
3. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. 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.
6. 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.
7. As a means of discerning compliance with Discharge Specification 6, the dissolved oxygen (DO) content in the upper one foot of the wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in the wastewater pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
8. The Discharger shall maintain and operate ponds sufficiently to protect the integrity of exterior containment embankments and prevent overtopping or overflows. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the Discharger shall operate ponds to maintain a minimum freeboard of two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain a permanent marker with calibration that indicates the water level at the design capacity and enables determination of available operational freeboard. If the measured freeboard is less than two feet (or the alternative minimum certified design freeboard), within 72 hours of the observation, the Discharger shall notify the Regional Water Board of its finding, and report both short and long term plans to maintain the integrity of the

embankments. Short term measures shall be affected within three weeks of observing that the freeboard was less than two feet, or the alternative design freeboard.

9. 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.
10. By **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications 8 and 9.
11. 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.
12. 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.
13. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.
14. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every **five years** beginning in 2017 and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds **ten percent** of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within **12 months** after the date of the estimate.
15. Storage of residual solids, including pomace and/or diatomaceous earth on areas not equipped with means to prevent storm water infiltration, or a paved leachate collection system is prohibited.
16. No waste discharge shall occur within the 100-year floodplain.

E. Groundwater Limitations

1. The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than existing background groundwater quality or the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, whichever is greater.

2. Exceed nitrate (as nitrogen) concentrations of 10 mg/L.
3. Have a pH of less than 6.5 or greater than 8.5.
4. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses

F. Land Application Area Specifications

1. Tailwater runoff and spray of recycled water shall not be discharged outside of the LAAs.
2. Crops or vegetation (which may include pasture grasses, native grasses, trees, vegetable crops, and/or ornamental landscaping) shall be grown in the LAAs.
3. Land application of wastewater shall be managed to minimize erosion.
4. According to GeoTracker Map, the edges of all LAAs (existing and new) are at least 25 feet from all manmade or natural surface water drainage courses, and at least 100 feet from any domestic water supply wells. Any proposed changes in setbacks shall be reported in writing to the Executive Officer for consideration.
5. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.
6. LAAs shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order.
7. Spray irrigation with wastewater is prohibited when wind speed (including gusts) exceeds 30 mph.
8. Sprinkler heads shall be designed, operated and maintained to create a minimum amount of mist.
9. Any irrigation runoff (tailwater) shall be confined to the LAAs or returned to the containment system and shall not enter any surface water drainage course or storm water drainage system.
10. Discharge of storm water runoff comingled with process water from the LAAs to off-site land or surface water drainage courses is prohibited.

G. Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds. Solid waste refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables. Except for waste solids originating from meat processing, residual solids means organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application.

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal operation and adequate storage capacity.

2. Any handling and storage of sludge, solid waste, and residual solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
3. Sludge and residual solids may be discharged to land in accordance with the Land Application Area Specifications of this Order.
4. If removed from the site, sludge, solid waste, and 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, 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. *Groundwater Triggers*

- a. As a means to evaluate potential increasing trends of constituents of concern, the Central Valley Water Board has established groundwater evaluation triggers based on monitoring data obtained from 2004-2015. Groundwater triggers are equal to one standard deviation above the arithmetic mean, or the Water Quality Objective, whichever is more restrictive. The triggers are not intended to act as groundwater limits, but as a basis for initiating further evaluation of potential impacts to groundwater from the land application of wastewater.
- b. The Annual Groundwater Monitoring Report shall evaluate if a trigger has been exceeded. A trigger exceedance evaluation shall consist of comparing the annual average concentration for each trigger constituent in each well during the calendar year to the corresponding trigger concentration. If any trigger is exceeded, the Discharger shall do further evaluation.
- c. Such further evaluation consists of determining concentration trends in the wells for specific constituents. If analysis indicates an increasing trend in any trigger constituent, then the Discharger will be required to perform a Pollutant Management Practices (PMP) evaluation to determine if best practices are still being implemented. If the PMP evaluation indicates that additional or upgraded practices are necessary, then the Discharger shall submit a work plan, including a time schedule for implementation, to the Executive Officer for review and approval. If the PMP evaluation indicates that best practices continue to be implemented and that no upgrades are required then no action will be required, and the groundwater triggers will be increased as discussed below. Alternatively, if a work plan is required then the groundwater triggers will be increased as discussed below, following completion of the work plan activities.
- d. Groundwater triggers will be reset (increased) and set equal to the new arithmetic mean plus one standard deviation, or the Water Quality Objective, whichever is more restrictive.

- e. The Discharger shall compare the annual average concentrations of chemical oxygen demand (COD), electrical conductivity (EC), fixed dissolved solids (FDS), nitrate, pH, total dissolved solids (TDS), and total Kjeldahl nitrogen (TKN) to the established groundwater triggers listed below for groundwater monitoring data obtained in monitoring wells MW-H, MW-1, MW-2, MW-3, and MW-4.

Table 7. Groundwater Triggers

Constituent	Units	MW-1 ¹	MW-2	MW-3	MW-4	MW-H
COD ²	mg/L	5.5	6.3	6.2 ³	3.7	7.3
EC	µmhos/cm	476.7	176.4	488.0	554.9	748.8
FDS	mg/L	324.9	174.9	285.3	348.0	453.2
NO ₃ -N ²	mg/L	1.1	3.3	6.0	2.5	4.2
pH	S.U.	7.3	8.03	7.0	7.2	7.1
TDS	mg/L	338.4	175.2	342.8	401.1	505.0
TKN ²	mg/L	1.3	1.9	1.7	1.4	1.5

¹ Upgradient Well

² For statistical calculations, non-detects were set equal to the reporting limit. The reporting limits of 20 mg/L COD reported in 2006 and 2008, and 5 mg/L TKN reported in 2014 were dismissed as outliers.

³ 50 mg/L COD reported in MW-3 in 2008 was dismissed as an outlier.

2. At least **180 days** prior to any sludge removal and disposal, the Discharger shall submit a *Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried sludge will be land applied to the LAAs or removed from the site prior to the onset of the rainy season.
3. 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**.
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 work plans 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. 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.
6. The Discharger shall comply with Monitoring and Reporting Program R5-2017-0023, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the Monitoring and Reporting Program (MRP).
7. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
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 Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
12. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

13. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
14. In the event of any change in control or ownership of the facility, 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.
15. 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 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements* 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 CWC. 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.
16. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
17. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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 or with the WDRs 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.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

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

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on 24 February 2017.

ORIGINAL SIGNED BY
PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2017-0023

FOR
PACIFIC COAST PRODUCERS INC.
OROVILLE PROCESSING FACILITY AND PALERMO LAND APPLICATION AREA
BUTTE COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

Section 13267 of the California Water Code states, in part:

“In conducting an investigation specified in subdivision (a), the 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 within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region 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.”

Section 13268 of the California Water Code states, in part:

“(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

Pacific Coast Producers Inc. owns and operates the facility that is subject to the WDRs cited herein, and the monitoring reports are necessary to determine compliance with the WDRs.

Pursuant to Section 13267 of the California Water Code, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

A glossary of terms used in this MRP is included on the last page.

I. GENERAL MONITORING REQUIREMENTS

A. FLOW MONITORING

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically at least once per year and records of calibration shall be maintained for review upon request.

B. SAMPLING LOCATIONS

Samples shall be obtained at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Sampling Location Name	Sampling Location Description
EFF	Location where a representative sample of Process Wastewater can be obtained prior to discharge to the conveyance pipeline between Oroville and Palermo.
SIW	Location where a representative sample of the supplemental irrigation water can be obtained.
MW-1, MW-2, MW-3, MW-4, and MW-H	Groundwater monitoring well locations.
PND	Wastewater Pond

C. SAMPLING AND SAMPLE ANALYSIS

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

- a. The operator is trained in proper use and maintenance of the instruments;
- b. The instruments are field calibrated at the frequency recommended by the manufacturer;

- c. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
- d. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);
- *Test Methods for Evaluating Solid Waste* (EPA);
- *Methods for Chemical Analysis of Water and Wastes* (EPA);
- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);
- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and
- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

II. SPECIFIC MONITORING REQUIREMENTS

A. EFFLUENT MONITORING

Effluent samples shall be collected from the sump at the Oroville Processing Facility prior to discharge to the conveyance pipeline between Oroville and Palermo. Effluent samples shall be representative of the volume and nature of the discharge. At a minimum, effluent shall be monitored as specified below:

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	MGD	Meter	Daily	Monthly
pH	S.U.	Grab	Weekly	Monthly
Electrical Conductivity (EC)	µmhos/cm	Grab	Weekly	Monthly
Chemical Oxygen Demand (COD)	mg/L	Grab	Weekly	Monthly
Biological Oxygen Demand (BOD)	mg/L	Grab	Weekly	Monthly
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	Weekly	Monthly
Nitrate (NO ₃) as N	mg/L	Grab	Weekly	Monthly
Total Dissolved Solids (TDS)	mg/L	Grab	Weekly	Monthly
Fixed Dissolved Solids (FDS)	mg/L	Grab	Weekly	Monthly

Standard Minerals ¹	mg/L	Grab	Annually	Annually
CA Title 22 Total Metals (CAM 17)	µg/L	Grab	Annually	Annually

¹ Standard minerals shall include, at a minimum, the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

² CA Title 22 Total Metals (CAM 17) shall include, at a minimum, the following: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc

B. POND MONITORING

Ponds used for treatment, storage, or disposal of wastewater shall be monitored as specified below. Dissolved oxygen monitoring applies to any pond containing more than two feet of standing water:

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Dissolved Oxygen (DO) ¹	mg/L	Grab	Monthly	Monthly
Freeboard ²	0.1 feet	Measurement	Monthly	Monthly
Odors	--	Observation	Monthly	Monthly
Berm condition	--	Observation	Monthly	Monthly

¹ Samples shall be collected opposite the pond inlet at a depth of one foot.

² Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet.

C. LAND APPLICATION AREA MONITORING

Daily Pre-Application Inspections

The Discharger shall inspect the LAAs at least once daily prior to and during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly monitoring reports. The following items shall be documented for each field to be irrigated on that day:

- a. Evidence of erosion;
- b. Containment berm condition;
- c. Condition of above-ground pipes, flow control valves, sprinklers, and/or drip emitters (as applicable);
- d. Open and closed valves;
- e. Soil saturation;
- f. Ponding;
- g. Irrigation supply and tailwater ditch condition and potential for runoff to off-site areas;
- h. Potential and actual discharge of waste to surface water;

- i. Odors that have the potential to be objectionable at or beyond the property boundary; and
- j. Insects (e.g., flies, mosquitoes).
- k. Any corrective actions taken based on observations made.

A copy of entries made in the log during each month shall be submitted as part of the Monthly Monitoring Report. If no irrigation with wastewater takes place during a given month, then the monitoring report shall so state.

Land Application Monitoring

The Discharger shall perform the following routine monitoring and loading calculations for each discrete LAA each day when water is applied.

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Wind Speed	mph	Meter	Daily	Monthly
Precipitation	inches	Rain Gauge ¹	Daily	Monthly
Acreage Applied	Acres	Calculated	Daily	Monthly
Wastewater Application Rate	Gallons	Meter	Daily	Monthly
Supplemental Irrigation Water Rate	Gallons	Meter	Daily	Monthly
BOD Loading Rate ²	lbs./acre/day	Calculated	-	Monthly
FDS Concentration ²	mg/L	Calculated	-	Monthly
Total Nitrogen Loading Rate ²	lbs./acre	Calculated	-	Monthly

¹ Data obtained from the nearest National Weather Service rain gauge is acceptable.

² Loading rates shall be calculated using the methods specified in Waste Discharge Requirements Section C Provision 2.

D. GROUNDWATER MONITORING

The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well. The well shall be replaced following approval of the work plan.

Applicability of Groundwater Limitations

Prior to construction and/or sampling of any new groundwater monitoring wells, the Discharger shall submit plans and specifications for approval. Once installed, all new wells shall be added to the groundwater monitoring network. The following table lists all existing monitoring wells and designates the purpose of each well:

MW-1 ¹	MW-2	MW-3	MW-4	MW-H
-------------------	------	------	------	------

¹ Upgradient Well

Groundwater Sampling and Analysis

Prior to purging or sampling, the groundwater depth shall be measured in each well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction.

Low or no-purge sampling methods are acceptable, if described in an approved Sampling and Analysis Plan. Otherwise, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling. Groundwater monitoring for all monitoring wells shall include, at a minimum, the following:

Constituent/Parameter	Units	Sample Type	Monitoring and Reporting Frequency
Depth to Groundwater ¹	0.01 feet	Measurement	Semi-Annually ²
Groundwater Elevation ¹	0.01 feet.	Calculation	Semi-Annually ²
pH	S.U.	Grab	Semi-Annually ²
Electrical Conductivity (EC)	µmhos/cm	Grab	Semi-Annually ²
Chemical Oxygen Demand (COD)	mg/L	Grab	Semi-Annually ²
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	Semi-Annually ²
Nitrate (NO ₃) as N	mg/L	Grab	Semi-Annually ²
Total Dissolved Solids (TDS)	mg/L	Grab	Semi-Annually ²
Fixed Dissolved Solids (FDS)	mg/L	Grab	Semi-Annually ²
Standard Minerals ³	mg/L	Grab	Semi-Annually ²
CA Title 22 Dissolved Metals ⁴ (CAM 17)	µg/L	Grab	Semi-Annually ²

¹ Groundwater elevations shall be determined based on depth-to-water measurements using a surveyed elevation reference point on the well casing.

² Semi-Annual monitoring shall be conducted in the first and third quarters of each year.

³ Standard minerals shall include, at a minimum, the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

⁴ Samples for metals shall be filtered prior to preservation and digestion using a 0.45-micron filter. CA Title 22 Metals (CAM 17) shall include, at a minimum, the following: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc

E. RESIDUAL SOLIDS MONITORING

The Discharger shall monitor the residual solids generated and disposed of on a monthly basis. The following shall be monitored and reported:

- a. Volume of Solids Generated. Solids may include pomace, seeds, stems, diatomaceous earth, screenings, pond solids, and sump solids, or other material.
- b. Volume Disposed of Off-site. Describe the disposal method (e.g. animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); and the name of the hauling company.
- c. Volume Disposed of On-site. Describe the amount disposed (tons); location of on-site disposal (e.g. land application area field); method of application, spreading, and incorporation; application rate (tons/acre), and weekly grab sample analysis for total nitrogen.

F. SUPPLEMENTAL IRRIGATION WATER SUPPLY MONITORING

A sampling station shall be established at each supplemental irrigation water source where a representative sample can be obtained. Water supply monitoring shall include at least the following:

Constituent/Parameter	Units	Sample Type	Monitoring and Reporting Frequency ¹
pH	S.U.	Grab	Annually
Nitrate (NO ₃) as N	mg/L	Grab	Annually
Total Dissolved Solids (TDS)	mg/L	Grab	Annually
Fixed Dissolved Solids (FDS)	mg/L	Grab	Annually
Standard Minerals ²	mg/L	Grab	Annually

¹ For potable water only, the Discharger may submit a copy of the most current Department of Public Health Consumer Confidence Report or analytical results submitted to the County Environmental Health Department or California Department of Public Health, as applicable.

² Standard minerals shall include, at a minimum, the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

III. REPORTING REQUIREMENTS

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to:

centralvalleyredding@waterboards.ca.gov

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the subject line of the email:

Pacific Coast Producers/Butte/WDR

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
364 Knollcrest Drive, Suite 205
Redding, CA 96002

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports should be included in the monitoring reports. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

In the future, the State Water Board or Central Valley Regional Water Board may require electronic submittal of monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System.

Monthly Monitoring Reports

Monthly monitoring reports shall be submitted to the Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by **March 1st**). At a minimum, each monitoring report shall include the following:

1. Results of Effluent Monitoring

2. Results of Pond Monitoring
3. Results of Land Application Area Monitoring, including:
4. Results of required monthly Residual Solids Monitoring
5. Copies of laboratory analytical report(s).
6. A comparison of monitoring data to the effluent limitations and discharge specifications and an explanation of any violation of those requirements.
7. For each discrete LAA, a comparison of monitoring data to the loading rate limitations and discharge specifications and an explanation of any violation of those requirements.
8. A copy of inspection log page(s) documenting inspections completed during the month.
9. A calibration log verifying calibration of all monitoring instruments and devices used to fulfill the prescribed monitoring program.

Semi-Annual Monitoring Reports

Semi-annual groundwater monitoring reports shall be submitted to the Central Valley Water Board following the first and third quarters, on **1 May and 1 November of each year**. At a minimum, each semi-annual groundwater monitoring report shall include the following:

1. A narrative description of all preparatory, monitoring, sampling, and sample handling for groundwater monitoring.
2. A field log for each well documenting depth to groundwater; method of purging; parameters measured before, during, and after purging; sample preparation (e.g., filtering); and sample preservation.
3. Calculation of the groundwater elevation at each monitoring well, and determination of groundwater flow direction and gradient on the date of measurement.
4. Summary data tables of historical and current water table elevations and analytical results.
5. Copies of laboratory analytical report(s).
6. A comparison of monitoring data to the groundwater triggers.
7. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter

Annual Monitoring Reports

The annual monitoring report shall be submitted to the Central Valley Water Board **1 February of the next year**. At a minimum, each annual monitoring report shall include the following:

1. Effective 2017, and every five years thereafter, an evaluation of sludge accumulation and sludge removal plans pursuant to WDR Discharge Specification D.14.
2. Concentration vs. time graphs for each monitored constituent using all historic groundwater monitoring data. Each graph shall show the background groundwater

concentration range, the trigger concentration specified in Section H. Provision 1 of the WDRs, and the Groundwater Limitation as horizontal lines at the applicable concentration.

3. An evaluation of the groundwater quality beneath the site and determination of whether any trigger concentrations were exceeded in any compliance well during the calendar year. This evaluation shall be conducted as required by Section H. Provision 1 of the WDRs.
4. A summary of the disposal of residual solids during the calendar year.
5. Analytical results for all supplemental irrigation water supply sources.
6. An evaluation of the performance of the processing facility and land application areas, including discussion of capacity issues, loading rates, nuisance conditions, and a forecast of the flows anticipated in the next year, as described in Standard Provision E.4.
7. A discussion of any compliance issues and any corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
8. Monitoring equipment maintenance and calibration records, as described in Standard Provision C.4
9. A discussion of any data gaps and potential deficiencies or redundancies in the monitoring system or reporting program.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____ *ORIGINAL SIGNED BY*
PAMELA C. CREEDON, Executive Officer

_____ 24 February 2017

(Date)

INFORMATION SHEET

BACKGROUND

Pacific Coast Producers Inc. (PCP) owns and operates a cannery that produces canned fruit, including peaches, pears, and fruit cocktail (mixed fruit in single serve plastic bowls with fruit and syrup or fruit and gel combinations). The cannery is located in the City of Oroville in Butte County at 1601 Mitchell Avenue. Process wastewater and storm water from the cannery is transported from the plant to a land application area, located south of the cannery in Palermo, by means of a 6 ½ mile pipeline. For final disposal, the process wastewater and storm water has historically been applied to approximately 309 acres of a 369-acre land application area, consisting of 10 fields, and three ponds.

Waste Discharge Requirements (WDRs) Order R5-2003-0045, adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) on 14 March 2003, prescribes requirements for the discharge of fruit processing wastewater to the land application area near Palermo. Order R5-2003-0045 allows a monthly average wastewater flow of up to 650,000 gallons per day (gpd) from 1 October to 15 November, 250,000 gpd from 16 November to 30 June, and three (3) million gallons per day (MGD) from 1 July to 30 September. The Discharger proposes to expand the land application area and maintain current discharge rates. Due to the expanded land application area, Order R5-2003-0045 no longer adequately describes the proposed operations.

On 28 April 2016, PCP submitted a Report of Waste Discharge requesting that Waste Discharge Requirements be revised to incorporate additional lands for land application of process wastewater. The expanded area includes additional parcels within the adjacent Pheasant Club owned by PCP. The additional land application area is approximately 100 acres. The quantity of process wastewater applied to land will remain at current rates; therefore the expansion to 409 acres will reduce constituent loading rates.

EXISTING FACILITY AND DISCHARGE

The Discharger produces canned fruit, including peaches, pears, and fruit cocktail (mixed fruit in single serve plastic bowls, with fruit and syrup or fruit and gel combinations). Process wastewater is generated during fruit washing, equipment sanitation, and product transfers within the processing facility (via flumes and pumps). Solids are removed from the process wastewater by a screen prior to being discharged to a sump and ultimately the conveyance pipe-line.

Process wastewater and some storm water from the cannery are transported from the cannery to the land application area in Palermo by means of a 6 ½ mile pipeline. For final disposal, the process wastewater and storm water is applied to approximately 309 acres of the 369-acre land application area. The current land application area is divided into ten fields, separated by levees, dikes, and roads, and plumbed together through a series of gates, culverts, and pumps. Various crops are grown in each field, including wetland vegetation, grasses, and forage crops. Irrigation methods also vary in each field, which include wheel line sprinkling, flood irrigation, and traveling gun sprinkling. The Discharger has developed a plan to manage the application of process wastewater during the rainy season as summarized below:

- During dry periods, when significant precipitation is not forecasted, process wastewater will be applied to fields 0 through 4 (approximately 129 acres).
- During rainy periods when the 3-day weather forecasts predicts a greater than 30% change of rain, all process wastewater will be applied to Fields 5A, 5B, 6, 7A, and 8 (approximately 158 acres).

- A 2.5 million gallon emergency storage pond is located in Field 9. The storage pond is used to manage storm water runoff from Fields 5A, 5B, 6, 7A, and 8, and to hold process wastewater during periods of heavy rainfall when fields are saturated.
- The cannery operates all year long, but the Discharger is prepared to curtail wastewater discharge from the processing facility to maintain compliance with WDRs.

A summary of the process wastewater characteristics based on monitoring data from 2011-2015 is provided in Table 1. Wastewater samples are obtained after solids screening.

Table 1. PCP Average Industrial Process Wastewater Characteristics from 2011-2015

Constituent	Units	Average	Range
Biological Oxygen Demand (5-day) (BOD)	mg/L	3156	55-6800
Chemical Oxygen Demand (COD)	mg/L	4000	710-8650
Electrical Conductivity (EC)	µmhos/cm	864	342-1635
Fixed Dissolved Solids (FDS)	mg/L	535	145-1395
Nitrate as N (NO ₃ -N)	mg/L	0.25	0.05-1.05
pH	S.U.	6.3	4.5-8.7
Total Dissolved Solids (TDS)	mg/L	1978	370-5063
Total Kjeldahl Nitrogen (TKN)	mg/L	9.2	1-36
Total Suspended Solids (TSS)	mg/L	437	25-4530

PLANNED CHANGES IN THE FACILITY AND DISCHARGE

The Discharger is planning to expand the land application area to include additional parcels within the adjacent Pheasant Club. The additional land application area totals approximately 100 acres. The quantity of process wastewater applied to land will remain at current rates; therefore the expansion to 409 acres will reduce overall constituent loading rates.

The current site has 309 acres of irrigable land with a loading capacity of 330 lb/acre/year of total nitrogen. The proposed expansion would add 100 acres of irrigable land with a similar nitrogen loading capacity. The expansion to 409 irrigable acres would reduce the loading rates of all the constituents of concern. The average annual loading rates from 2011-2015 are listed in Table 2.

Table 2. Current and Anticipated Loading Rates

Constituent	Annual Application (lbs./year)	Current Loading Rate ¹ (lbs./acre/year)	Expanded Loading Rate ² (lbs./acre/year)
Biological Oxygen Demand (BOD)	3,984,859	12,896	9,743
Chemical Oxygen Demand (COD)	5,139,492	16,633	12,566

Fixed Dissolved Solids (FDS)	878,085	2,842	2,147
Nitrate as N (NO ₃)	141	<1	<1
Total Dissolved Solids (TDS)	2,485,596	8,044	6,077
Total Kjeldahl Nitrogen (TKN)	13,465	44	33
Total Nitrogen (TN)	13,600	44	33
Total Suspended Solids (TSS)	764,020	2,473	1,868

¹ Loading Rate calculated using the current 309 irrigable acres.

² Loading Rate calculated using the expanded 409 irrigable acres

GROUNDWATER

Groundwater is monitored on a semi-annual basis in wells MW-1, MW-2, MW-3, MW-4, and MW-H. Groundwater is first identified, in these wells, approximately 20 to 30 feet below ground surface (bgs). The wells are located throughout the land application area as shown in Attachment B. Groundwater elevations show that monitoring well MW-1 is hydraulically upgradient. However, the most downgradient monitoring well cannot be determined due to varying groundwater elevations each year.

Concentrations of some monitored constituents, including chemical oxygen demand and nitrate, are greater in some downgradient monitoring wells when compared to the upgradient monitoring well MW-1. Twice in MW-3, nitrate concentrations in groundwater have been measured above the State and Federal Primary Maximum Contaminant Level (MCL) of 10 mg/L (NO₃ as N), once in 2007 and once in 2008. However, the levels have not been consistent and may be reflective of regional concentrations. Average groundwater concentrations from 2004-2015 are shown in Table 3.

Table 3. Average Groundwater Quality from 2004-2015

Constituent	Units	MW-1 ²	MW-2	MW-3	MW-4	MW-H	MCL
COD ¹	mg/L	3.4	3.7	3.97	2.7	4.5	-
EC	µmhos/cm	426	140	363	490	705	700 ³ , 900 ⁴
FDS	mg/L	264	126	223	282	381	-
NO ₃ -N ¹	mg/L	0.6	1.7	3.7	1.3	2.5	10 ⁵
pH	S.U.	7.0	7.7	6.7	7.0	6.9	6.5-8.5 ⁴
TDS	mg/L	304	146	259	309	470	450 ³ , 500 ⁴
TKN ¹	mg/L	0.92	1.06	0.98	0.93	0.95	-

¹ For statistical calculations, non-detects were set equal to the reporting limit. The reporting limits of 20 mg/L COD reported in 2006 and 2008, and 5 mg/L TKN reported in 2014 were dismissed as outliers.

² Upgradient Well

³ Agricultural Water Quality Goal

⁴ Secondary Maximum Contaminant Level

⁵ Primary Maximum Contaminant Level

⁶ 50 mg/L COD reported in MW-3 in 2008 was dismissed as an outlier.

The facility and discharge areas are in the Lower Feather River Hydrologic area. Surface water drainage from the land application area near Palermo is to Wyandotte Creek, which drains to Honcut Creek, a tributary to the Feather River below Lake Oroville.

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised June 2015 (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

ANTIDEGRADATION

The Discharger has been monitoring groundwater quality at the site since 1997. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility is based on existing background groundwater quality.

The discharge and the potential for groundwater degradation allowed in this Order is consistent with the Antidegradation Policy since; (a) the limited degradation allowed by this Order will not result in water quality less than the water quality objectives, or unreasonably affect present and anticipated beneficial uses, (b) the Discharger has implemented BPTC to minimize degradation, and (c) the limited degradation is of the maximum benefit to the people of the State.

CEQA

A Negative Declaration was certified by the Central Valley Regional Water Quality Control Board on 24 February 2017 in accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Negative Declaration describes the project as the expansion, and operation of the new land application areas in the Pheasant Club.

TITLE 27

Title 27 of the California Code of Regulations, section 20005 et seq (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of

groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Unless exempt, release of designated waste is subject to full containment pursuant to Title 27 requirements. Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards and other Title 27 requirements provided the following conditions are met:

- a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;
- b. The discharge is in compliance with the applicable basin plan; and
- c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

The discharge meets the above requirements and is therefore exempt from Title 27.

Proposed Order Terms and Conditions

DISCHARGE PROHIBITIONS, SPECIFICATIONS AND PROVISIONS

The proposed Order would prohibit discharge of wastes to surface waters or surface water drainage courses.

The proposed Order would set the following flow limitations for process wastewater:

Flow Measurement	Flow Limit ¹
1 July to 30 September	3 million gpd
1 October to 15 November	650,000 gpd
16 November to 30 Jun	250,000 gpd

¹ 30-day average.

The proposed Order would set the following effluent and mass loading limitations:

Constituent	Units	Limit
BOD Mass Loading	lbs./acre/day	150 ¹
Average FDS Concentration ²	mg/L	576 ³ or re-calculated for crop demand
Total Nitrogen Mass Loading	lbs./acre/year	330 ⁴

¹ The Central Valley Water Board considers this operation to be in organic loading Risk Category 2 (BOD₅ ≤ 100 lbs./acre/day) as outlined in the California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water*. However, the *Manual of Good Practice* recommends allowing a 50 percent increase in the BOD loading rates in cases where sprinkler irrigation is used.

² Flow-weighted average based on total flow and concentration for each discharge source.

³ 576 mg/L FDS is nominally equivalent to the EC secondary maximum contaminant level of 900 μ mhos/cm. It is generally more convenient to calculate salinity on a concentration basis (mg/L) rather than on an EC basis for compatibility with the units of mass uptake of salt by the crop (*Manual of Good Practice*, 2007).

⁴ Based on the nitrogen loading capacity of the LAA as described in the 2004 *Nutrient Loading Assessment Report*.

The proposed Order's provisions regarding the wastewater ponds' dissolved oxygen and freeboard are consistent with Central Valley Water Board policies for the prevention of nuisance conditions and are applied to all similarly-situated facilities.

The proposed Order prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses of groundwater.

MONITORING REQUIREMENTS

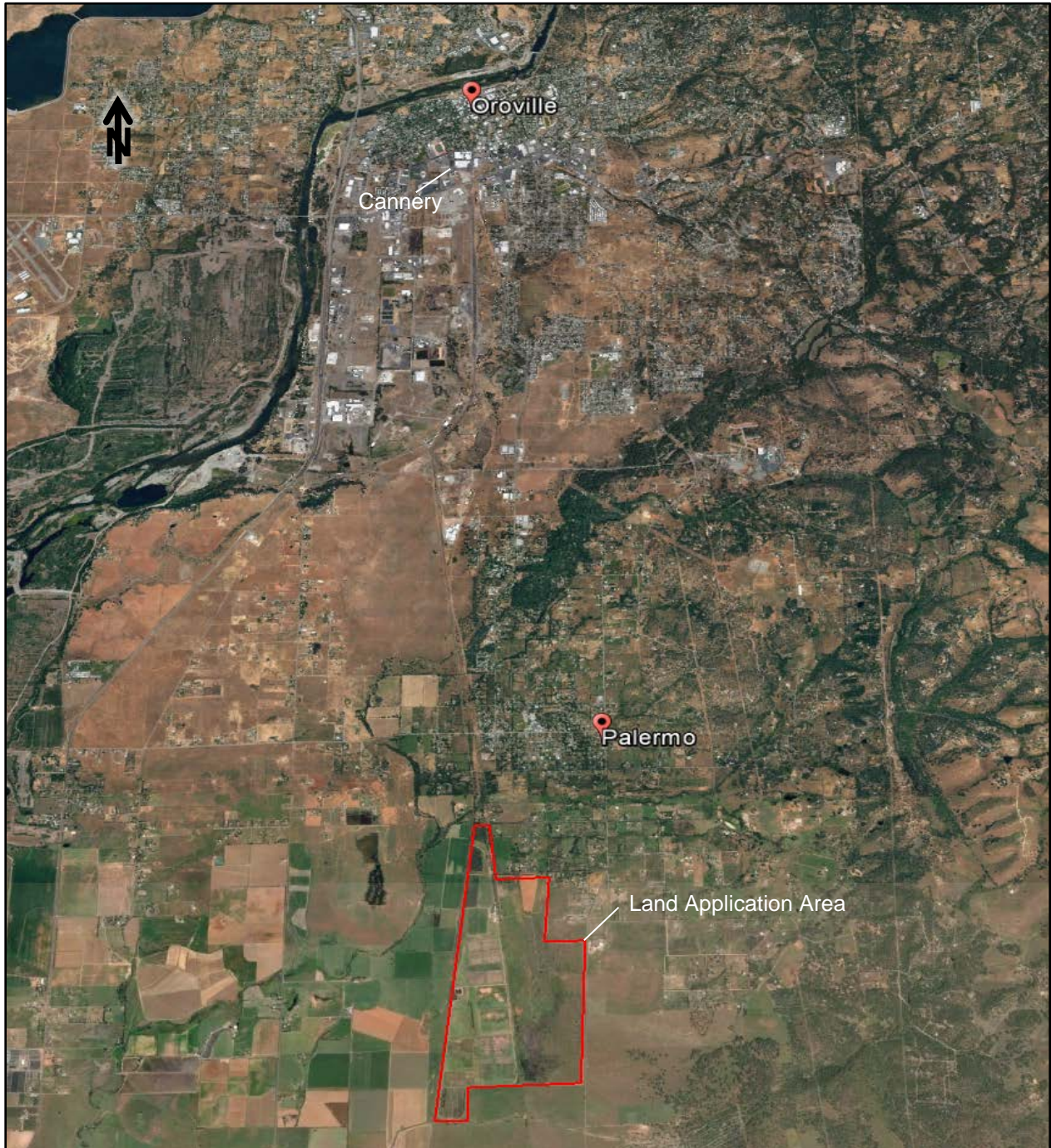
Section 13267 of the California Water Code authorizes the Central Valley Water Board to require the Discharger to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State.

The proposed Order includes effluent, pond, land application area, groundwater, residual solids, and supplemental irrigation water monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent limitations prescribed by this Order, and evaluate groundwater quality and the extent of degradation, if any, caused by the discharge.

REOPENER

The conditions of discharge in the proposed 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 proposed Order would set 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.

ATTACHMENT A- LOCATION MAP

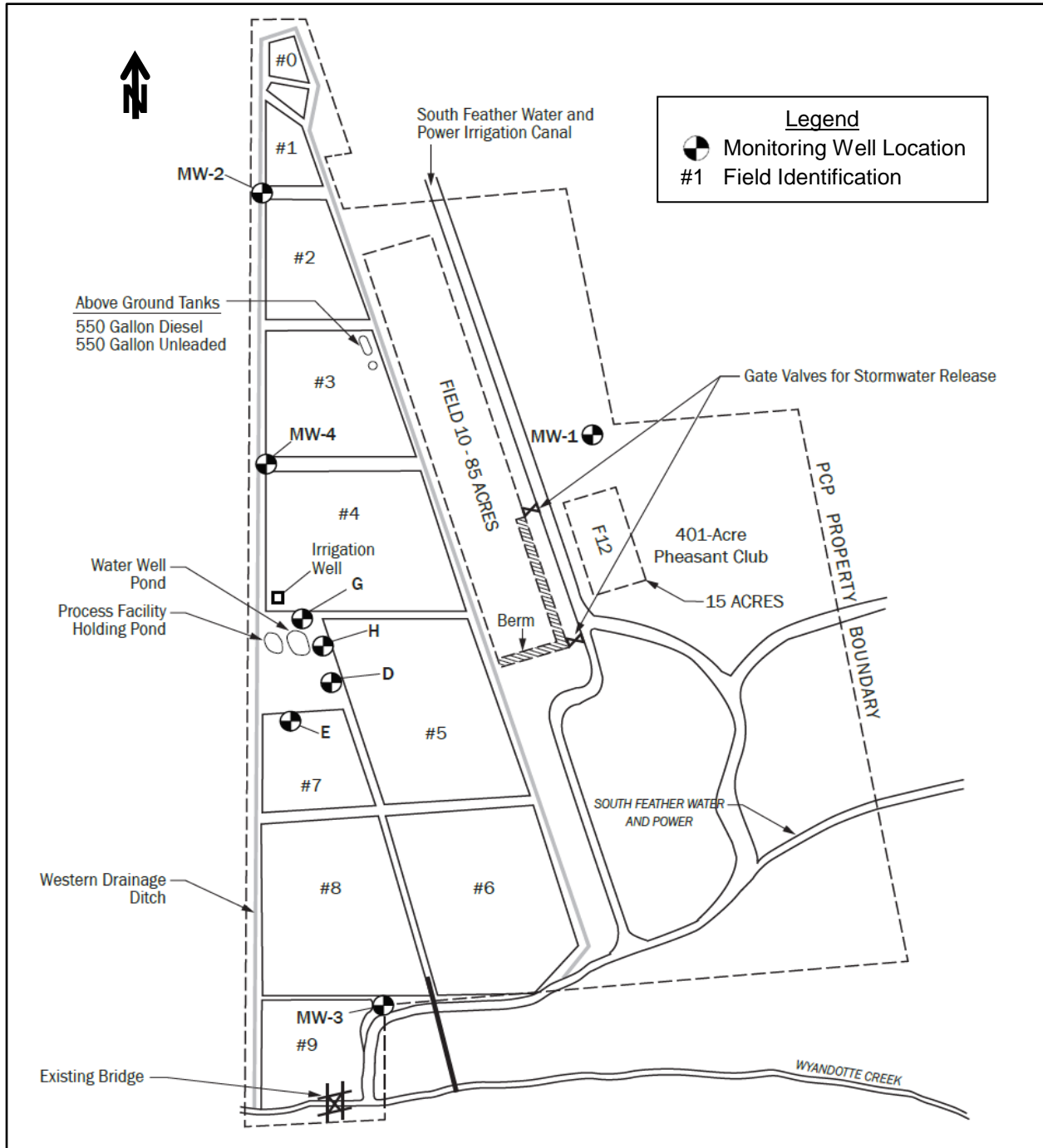


DRAWING REFERENCE:
GOOGLE EARTH
MAP DATA: © 2016 GOOGLE
NO SCALE

LOCATION MAP

PACIFIC COAST PRODUCERS INC.
OROVILLE PROCESSING FACILITY AND
PALERMO LAND APPLICATION AREA
BUTTE COUNTY

ATTACHMENT B- SITE MAP



DRAWING REFERENCE:
 BROWN AND CALDWELL
 28 JULY 2016
 SUPPLEMENTAL
 INFORMATION ON ROWD
 NO SCALE

SITE MAP

PACIFIC COAST PRODUCERS INC.
 PALERMO LAND APPLICATION AREA
 BUTTE COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** [*Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.*] as soon as it or its agents

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have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

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complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

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certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

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- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. 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 Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.
 - c. The monthly average concentration is the arithmetic mean of measurements made during the month.
 - d. The "daily maximum" **discharge** is the total discharge by volume during any day.

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- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

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additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

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- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers