

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2016-0100

WASTE DISCHARGE REQUIREMENTS

FOR
WM BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

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

1. On 6 February 2003, WM Bolthouse Farms, Inc. submitted a letter requesting modifications to Waste Discharge Requirements Order 5-00-150 that regulate the Bolthouse Bakersfield processing facility (Facility). The modifications proposed at that time included acquiring additional acreage to enlarge the existing land application areas to about 2,068 acres, and requesting an increase in the permitted discharge from 8.0 to 12.0 million gallons per day (mgd). WM Bolthouse Farms, Inc. staff also notified Central Valley Water Board staff that its product line was changing to include premium juice drinks and salad dressings.
2. WM Bolthouse Farms, Inc. (hereafter Bolthouse or Discharger) owns and operates the facility that generates the waste and the land discharge areas and is responsible for compliance with these Waste Discharge Requirements (WDRs).
3. The facility is at 7200 East Brundage Lane on the east side of the City of Bakersfield (Section 36, T29S, R28E, MDB&M) as shown on Attachment A, attached hereto and made part of this Order by reference. The facility itself occupies Assessor's Parcel Numbers (APN) 145-090-02, -03, -10; APN 145-080-11, -22, -40, -45; and APN 173-370-03, -04, -05, -06).
4. On 17 September, 2015, Bolthouse submitted a letter further describing the Facility, the different products now processed and packaged at the Facility, and the efforts Bolthouse has undertaken to reduce its water usage at the Facility in recent years. WDRs Order 5-00-150, adopted by the Central Valley Water Board on 16 June 2000, prescribes requirements for the discharge of carrot processing wastewater to about 1,450 acres of nearby farmland. The land application areas have been increased and the Facility now processes juice drinks and salad dressing in addition to carrots. Therefore, Order 5-00-150 will be rescinded and replaced with this Order.

Existing Facility and Discharge

5. The Facility processes whole carrots and "short cuts" or "baby" carrots, premium fruit juice blends, and salad dressing. Fruit and vegetables for the juices and salad dressings are not actually processed on site. Juice, vegetable, and other ingredients are shipped to the site, where they are blended and packaged for resale. Whole

carrots are offloaded at a conveyance flume and are washed using recycled water from the short cuts processing along with fresh water from groundwater supply wells. Wastewater discharged from the whole carrots processing is screened and sent to lined storage and settling ponds to remove sediment. The wastewater is then recirculated back to the conveyance flume and the carrot wash areas. Chlorine dioxide is dosed into the recycled water for oxidation and disinfection. The short cuts are abrasively peeled and the wastewater is screened, recycled through the whole carrot processing area, before being discharged to the lined settling ponds and the lined wastewater storage/distribution pond.

6. Soil and entrained solids are removed or settled from the waste stream in lined settling ponds present on property the Discharger refers to as the Banducci Ranch that is directly east of the Facility as shown on Attachment B, attached hereto and made part of this Order by reference. Wastewater is stored in a 1.0 million gallon lined wastewater storage/distribution pond prior to discharge to the land application areas. The Banducci Ranch is comprised of about 79 acres.
7. Wastewater is discharged to the lined 1.0 million gallon capacity storage/distribution pond and it is used in addition to supplemental well water to irrigate crops grown on 2,068 acres of farmland as shown on Attachment C, attached hereto and made part of this Order by reference. The Discharger separates the ranches or land application areas into the South Brundage land application areas that include the Fanucchi ranch property and the North Brundage land application areas that includes the remaining ranch properties. The properties used as land application areas are referred to by ranch names as listed in the following table.

Table 1

Land Application Areas

<u>Ranch Name</u>	<u>Acres</u>
Porter	742
Nickle	148
Limi	129
Kirschenmann	295
Fanucchi	<u>754</u>
Total – 2068 acres	

8. The quality of the wastewater discharged to the lined storage/distribution pond is shown in the next several tables. Table 2 lists the results of select salinity and general mineral constituents. The data is from January 2013 through 2015. The average is the first number listed and the range of the results is listed in the parentheses below.

Table 2

Flow <u>mgd¹</u>	Effluent Quantity/Quality				
	Electrical Conductivity <u>µmhos/cm²</u>	Total Dissolved Solids <u>mg/L³</u>	Fixed Total Dissolved Solids <u>mg/L³</u>	Chloride <u>mg/L³</u>	Sodium <u>mg/L³</u>
5.849	1,304	1764	722	218	158
<u>(0.064 - 11.45)</u>	(120 - 2,000)	(770 - 2,400)	(330 - 722)	(160 - 260)	(130 - 180)

1. mgd = million gallons per day.
2. µmhos/cm = micromhos per centimeter.
3. mg/L = milligrams per liter.

The flow is within the 12.0 mgd authorized by WDR Order 5-00-150, but the average electrical conductivity (EC) exceeds Discharge Specification that limits the EC of the discharge to 500 micromhos per centimeter (µmhos/cm) plus the EC of the source water. The EC of the source water is typically around 550 µmhos/cm and results in an EC limit of about 1,050 µmhos/cm. In 2013, Bolthouse began a water conservation program that by mid-2015 had reduced the water usage at the Facility by 13 percent (300,000,000 gallons). Unfortunately, the water conservation efforts resulted in the EC of the effluent increasing to an average of 1,300 µmhos/cm. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2015* (hereafter Basin Plan) contains an exception to the EC effluent limit for dischargers that cause a net decrease in the salt load added through water conservation efforts, and the discharge from the Bolthouse Bakersfield Facility qualifies for the exception. To ensure the Discharger continues to evaluate the salt load in its discharge, this Order contains Provision G. 13 that requires the Discharger to prepare a Salinity Management Plan that will be updated every two years to ensure the salt in the discharge is continuing to be evaluated.

9. Chloride in the effluent is elevated when compared to the Tulare Lake Basin Plan effluent limit that requires the discharges of wastewater that may recharge “good quality” groundwater to not exceed an EC of 1,000 µmhos/cm, a chloride content of 175 milligram per liter (mg/L), and a boron content of 1.0 mg/L. It is however, less than the Secondary maximum contaminant level (MCL) of 250 mg/L, and as shown in the following groundwater section, chloride concentrations vary greatly in nearby groundwater wells and have since the late 1940’s and early 1950’s.
10. Table 3 contains the results of monitoring for the various nitrogen forms, biochemical oxygen demand (BOD), and total suspended solids (TSS). The data is from January 2013 through 2015. The average is the first number listed and the range of the results is listed in the parentheses below.

Table 3
Effluent Quality

Nitrate as Nitrogen <u>mg/L¹</u>	Total Kjeldahl Nitrogen <u>mg/L¹</u>	Total Nitrogen <u>mg/L¹</u>	Ammonia <u>mg/L¹</u>	Biochemical Oxygen Demand <u>mg/L¹</u>	Total Suspended Solids <u>mg/L¹</u>
3.4	31.2	34.6	2.4	1,983	668
(nd ² - 3.4)	(5 - 91)	(5.0 - 110)	(nd ² - 16)	(190 - 3,900)	(12 - 3,800)

1. mg/L = milligrams per kilogram.
2. nd = not detected by the laboratory.

11. Nitrogen loading from the discharge in 2015 ranged from 35 to 235 pounds per acre per year (lbs/ac/yr). Crops grown in 2015 included alfalfa, wheat, and corn that can utilize between 175 to 480 lbs/ac/yr of nitrogen. The nitrogen uptake of the crops grown far exceeds the amount of nitrogen provided by the wastewater and with application at agronomic rates the discharge is unlikely to degrade the underlying groundwater quality. WDR Order 5-00-150 has daily maximum and monthly average limits for BOD of 300 pounds per day (lbs/ac/day) daily max, and 100 lbs/ac/day monthly average. The monthly average BOD loading limit was less than 100 lbs/ac/day in 11 of 12 months of 2015, with the BOD load in July being 110 lbs/ac/day. Resting periods vary to the various land application parcels, but the cycle average for 2015 was reported to average 74 lbs/ac/day.
12. Table 4 contains the results of monitoring for select general minerals constituents. The data is from January 2013 through 2015. The average is the first number listed and the range of the results is listed in the parentheses below.

Table 4

Effluent Quality					
Alkalinity <u>mg/L¹</u>	Bicarbonate <u>mg/L¹</u>	Sulfate <u>mg/L¹</u>	Calcium <u>mg/L¹</u>	Potassium <u>mg/L¹</u>	Boron <u>mg/L¹</u>
210	212	77	107	133	0.254
(20 - 320)	(10 - 330)	(59 - 94)	(84 - 130)	(26 - 190)	(0.200 - 0.400)

1. mg/L = milligrams per liter.

Other Considerations for Food Processing Waste

13. Excessive application of food processing wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and unreasonably degrade underlying groundwater. It is reasonable to expect some attenuation of various waste constituents that percolate below the root zone within the vadose (unsaturated) zone. Specifically, excess nitrogen can be mineralized and denitrified by soil microorganisms, organic constituents (measured as both BOD and volatile dissolved solids) can be oxidized, and the cation exchange capacity of the soil may immobilize some salinity constituents.

14. Irrigation with high strength wastewater can result in high BOD loading on the day of application. If the rate of oxygen transfer into the soil is not adequate, anaerobic or reducing conditions may result and lead to nuisance conditions. In addition, anaerobic conditions in soil can cause dissolution and leaching of some metals and increases in groundwater alkalinity. The maximum BOD loading rate that can be applied to land without creating the conditions described above can vary significantly depending on soil conditions and operation of the land application system.
15. Food processing wastewater may contain elevated concentrations of total dissolved solids (TDS) resulting from the fruit and vegetable products or materials used for production. Typically, a percentage of the TDS is organic, which will generally decompose into its component elements of carbon, hydrogen and oxygen that can be utilized by plants and microorganisms in the soil. In contrast, the fixed dissolved solids (FDS), is primarily that portion of the TDS that consists of inorganic constituents, which can accumulate in the soil. Excessive salts may leach to groundwater where they could degrade groundwater quality. Growing and harvesting crops provides a means to remove some of these constituents, particularly calcium, magnesium, potassium, phosphorus, nitrate, and ammonia.
16. This Order includes Provision G.14, requiring Bolthouse to complete a Nutrient Management Plan for the land application areas, which at a minimum must include procedures for monitoring the land application areas, and management practices that will ensure wastewater, irrigation water, commercial fertilizers, and soil amendments are applied at agronomic rates.

Site-Specific Conditions

17. The land surface in the vicinity of the Facility is relatively flat with a very slight natural slope to the west/southwest. The elevation of the Facility is about 430 feet above mean seal level, with the elevation at the northeast corner being just above 450 feet and the southwestern corner being about 425 feet above mean sea level. The East Side Canal is present along the western property boundary.
18. According to Federal Emergency Management Agency map number 06029C2325E, the Facility, along with the Limi, Porter, Nickle, and Kirschenmann land application areas are not within a 100-year flood plain, but the Fanucchi land application areas are within a 100-year flood plain. However, wastewater is sprinkler applied and does not stand for greater than 48 hours and in addition, this Order includes Discharge Specification C.6 that requires all conveyance, treatment, storage, and disposal systems to be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
19. Soils in the vicinity of the North Brundage land application areas are predominantly Wasco sandy loam with lesser amounts of the Delano sandy loam and the Panoche clay loam, according to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service. The Delano

sandy loam becomes the primary soil as one moves eastward across the North Brundage land application areas. Soils in the vicinity of the South Brundage land application areas are predominantly comprised of the Kimberlina fine sandy loam. All of these soils are well drained, Class 1 or Class 2 soils that have few limitations that restrict their use for agriculture.

20. Bolthouse conducts annual soil sampling within the land application areas collecting soil samples from up to six soil borings from depths of two, four, and six feet below the ground surface (bgs). The results for 2014 are summarized in Table 5. The data is from an 11 September 2014 soil sampling event. For the samples collected from within the land application areas, the listed value is the average of six soil samples collected from the specified depth. For the background samples, the listed value is the average of only two background soil samples collected from the specified depth. The average is the first number listed and the range of the results is listed in the parentheses below. For pH soil samples collected from the land application areas, the average is the true average, not the arithmetic average.

Table 5

<u>Sample Location</u>	<u>Depth Feet¹</u>	<u>pH s.u.²</u>	<u>Total Organic Carbon mg/kg³</u>	<u>Total Kjeldahl Nitrogen mg/kg³</u>	<u>Total Nitrogen mg/kg³</u>
Soil samples from the Porter, Kirschenmann, Limi, and Fanucchi land application areas	2	8.3 (8.2 - 8.6)	7,338 (2100 - 12,000)	691 (210 - 1,300)	703 (220 - 1,300)
	4	8.4 (8.1 - 8.8)	4,115 (520 - 9,500)	248 (100 - 460)	251 (100 - 460)
	6	8.4 (8.0 - 9.0)	4,400 (1,100 - 12,000)	198 (100 - 450)	201 (100 - 460)
	2	8.6 (8.5 - 8.6)	3300 (2100 - 4500)	315 (210 - 420)	320 (220 - 420)
	4	8.8 (8.7 - 8.8)	2210 (520 - 3900)	190 (100 - 280)	195 (100 - 290)
	6	8.9 (8.9 - 8.9)	2550 (1500 - 3600)	165 (140 - 190)	165 (140 - 195)

1. Feet = feet below the ground surface.
2. s.u. = Standard pH units.
3. Mg/kg = milligram per kilogram.

The data indicates generally decreasing concentrations with depth with the highest values reported from the two-foot samples. The results from the two-foot soil samples collected and analyzed from onsite (within the land application areas) are more than double the values reported from the two-foot samples collected from the background borings. The 315 milligrams per kilogram (mg/kg) of total Kjeldahl nitrogen (TKN) at two-feet in the background samples is about 45 percent of the 691 mg/kg value or

376 mg/L less than the results reported from the onsite two foot samples. This indicates the discharge has added nitrogen to the soil. However, while the concentrations in the four and six foot samples collected from onsite samples are higher than those from the background soil borings, the differences are considerably less than those observed in the two foot samples. The difference between the background and onsite soil samples at four feet was 59 mg/kg and the background sample comprised 77 percent of the onsite sample. The six foot samples are similar with the background sample being 33 mg/kg less than the onsite sample and the background sample comprising 83 percent of the onsite sample. The great differences in the two foot soil samples, and the similarity in the concentrations of the four and six foot soil samples indicate the cropping of the land application areas by Bolthouse is effectively removing total nitrogen from the soil and minimizes its potential to migrate to the underlying groundwater table.

21. The eastern Bakersfield area is characterized as semi-arid with hot dry summers and cooler winters. The rainy season generally extends from November through March. Average annual precipitation and pan evaporation for the area are 6.0 inches and in excess of 84 inches, respectively. The 100-year, 24-hour maximum precipitation is about 2.9 inches, based on maps obtained from the Kern County Resource Management Agency, Engineering, Survey and Permit Services, Floodplain Management Section.
22. Land uses in the vicinity of the WWTF are mixed with primarily residential housing of the City of Bakersfield present to the west, north, and northeast of the Facility. Commercial and industrial properties are present in the near vicinity of the Facility as well. Land use to the south and south east is mixed rural residential and agricultural use. The primary crops grown in the area are alfalfa, pasture, onions, garlic, corn, dry beans and tree crops including almonds, figs, peaches, pistachios, and walnuts, according to data published by the Department of Water Resources (DWR).

Groundwater Conditions

23. Groundwater in the area typically occurs in three main aquifers; a confined aquifer, an unconfined aquifer, and in perched aquifers with the confined aquifer separated by the E-Clay or Corcoran Clay. However, the aquifers in the vicinity of the Facility are contained in a regional trough bounded by the Edison Fault and the White Wolf Fault. The faults serve as barriers to the horizontal movement of groundwater in the area. The Edison and White Wolf Faults are about four miles east, and ten miles south of the Bolthouse land application areas. Based on a DWR map (*Depth to the Top of the Corcoran Clay, 1981*), it appears the Facility and the land application areas are just north of the extent of the E-Clay or Corcoran Clay and the underlying aquifer is unconfined to semi-confined with localized perched groundwater present in the area to the west and southwest.

24. Bolthouse does not have a groundwater monitoring well network that monitors first encountered groundwater, but depth to water information is available from the DWR and other nearby regulated sites. The elevation of groundwater in the vicinity of the Facility is approximately 180 feet above mean sea level, which corresponds to a depth of about 250 feet below the ground surface (bgs), according to information in *Lines of Equal Elevation of Water in Wells in Unconfined Aquifer*, published by DWR, Spring 2008. However, shallow perched groundwater is present in the area to the west/southwest. The regional flow of the unconfined aquifer is generally to the east, subject to local influences of irrigation well pumping, seepage of excess irrigation water, and groundwater recharge.
25. Bolthouse does monitor the quality of three of its own water supply wells used to supply water to the Facility and as irrigation wells used to irrigate the land application areas. In addition to its supply wells, Bolthouse sometimes uses the City of Bakersfield’s “East Niles” water system. Of the four supply wells, Bolthouse primarily uses the Limi and Porter wells as a water source and only uses the Nickel and East Niles wells on an as-needed basis. The averages for EC, TDS, nitrate as nitrogen, and chloride since 2006 are shown in the Table 6.

Table 6
Supply Water Quality

<u>Well</u>	<u>Electrical Conductivity</u> <u>µmhos/cm¹</u>	<u>Total Dissolved Solids</u> <u>mg/L²</u>	<u>Nitrate as Nitrogen</u> <u>mg/L²</u>	<u>Chloride</u> <u>mg/L²</u>
Limi	444	277	0.7	24
Porter	699	438	1.4	89
Nickel	1021	666	6.2	165
East Niles	883	558	5.1	111
<u>Limits³</u>	900/1600	500/1000	10	250/500

1. µmhos/cm = micromhos per centimeter.

2. mg/L = milligrams per liter.

3. The limits shown for EC, TDS, and chloride are Secondary maximum contaminant levels (MCLs) with the “Recommended” limit listed first (**900/1600**), and the “Upper” limit shown second (**900/1600**). The nitrate limit is the primary MCL.

None of the constituents in the Limi and Porter wells exceeds applicable groundwater limits or water quality objectives. The TDS in both the Nickel and East Niles wells exceed the “recommended” Secondary MCL of 500 mg/L, but are less than the “upper” Secondary MCL of 1,000 mg/L. The EC result from the Nickel well exceeds the recommended Secondary MCL of 900 µmhos/cm, but is less than the upper Secondary MCL of 1,600 µmhos/cm. The Limi and Porter wells are the primary water supply wells for the Facility, with the Nickel and East Niles systems only used on an as needed basis.

26. The City of Bakersfield (City) operates wastewater treatment plant (WWTP) No.2 about 2.5 miles west of the Facility and the land application areas extend from Lonsmith Avenue (~ 1 mile south of the Facility) in the north about 10 miles south to just past Bear Mountain Boulevard. The City monitors a network of 12 first

encountered groundwater monitoring wells that are set around the City's effluent land application areas. Groundwater is perched in this area and the depths of the wells range from about 50 to 110 feet bgs, as shown in Table 7. Table 7 lists the 12 first encountered groundwater wells monitored by the City, the depths of the wells, and the depth to water as measured in January of 2016.

Table 7

**City of Bakersfield – WWTP No. 2, Groundwater Monitoring Network
 Depth to Groundwater 16 January 2016**

<u>Well</u>	<u>Depth of Well</u> <u>feet bgs¹</u>	<u>Depth to Water</u> <u>feet bgs¹</u>	<u>Groundwater Elevation</u> <u>feet amsl²</u>
MW-1	98.0	83.62	278.13
MW-2	49.5	17.73	342.47
MW-3	98.0	80.98	296.32
MW-4	94.5	73.11	299.59
MW-5	69.5	---	---
MW-6	95.5	83.11	284.90
MW-7	110.0	82.69	278.13
MW-8	82.5	38.16	335.64
MW-9	82.5	56.71	297.60
MW-10	60.5	21.93	306.99
MW-11	90.0	46.25	296.92
MW-12	71.5	41.36	280.27

1. feet bgs = feet below the ground surface.
 2. feet amsl = feet above mean seal level.

27. The results show the differing depths of first encountered groundwater and indicate perched groundwater is present in the vicinity of the City of Bakersfield land application areas and the Bolthouse Fanucchi land application area. The Fanucchi land application areas are set between the City of Bakersfield land application areas and are in close proximity to City of Bakersfield wells MW-7 and MW-9 and Kern Sanitation Authority wells KSA-3 and KSA-5. The depth to groundwater decreases as one moves to the south and west of the Fanucchi land application area. MW-9 is about a half mile south of the southern end of the Fanucchi land application area, and MW-7 is about a half mile north of the northern edge of the Fanucchi land application area. MW-7 and MW-9 are about three miles apart, and in that distance the depth to water rises 26 feet from about 83 feet bgs in MW-7 to 57 feet bgs in MW-9. MW-10 is an upgradient City well on the western side of the City's land application area that is about 1.5 miles southwest of the Fanucchi land application area. MW-11 is about two miles south of MW-9 and MW-12 is another two miles south of MW-11.

28. Results from the first quarter 2016 monitoring event are summarized in Table 8.

Table 8
City of Bakersfield – WWTP No. 2, Groundwater Monitoring Network
Groundwater Results - 16 January 2016

<u>Well</u>	Electrical Conductivity <u>µmhos/cm¹</u>	Nitrate as Nitrogen <u>mg/L²</u>	Chloride <u>mg/L²</u>
MW-1	1230	17	78
MW-2	1580	24	190
MW-3	967	2.5	83
MW-4	1370	6.0	130
MW-5	---	---	---
MW-6	1420	9.3	160
MW-7	1280	8.1	130
MW-8	1030	0.45	90
MW-9	2960	36	260
MW-10	2320	0.9	220
MW-11	3200	16	250
MW-12	1720	8.4	280

1. µmhos/cm = micromhos per centimeter.

2. mg/L = milligrams per liter.

29. The data in Table 8 illustrates the highly variable nature of the water quality in the region. MW-3 and MW-8 are set right in among the City's wastewater ponds and have the lowest EC and nitrate results shown indicating the WWTF is not the cause of the elevated EC results observed in the region. MW-2 is upgradient of MW-7, but it has higher EC, chloride, and nitrate as nitrogen results than in downgradient MW-7. MW-9 is about a half mile south of the Fanucchi land application areas with MW-11 another two miles south of MW-9. Both wells contain EC and nitrate as nitrogen at levels that are elevated and exceed water quality objectives. However, MW-10 is the well set as an upgradient well for this area and while the EC and chloride averages in MW-10 are slightly lower than the averages observed in MW-9 and MW-11, EC and chloride in MW-10 exceed the Basin Plan water quality objectives for EC and chloride. Also, the EC in all three of these wells (MW-9 through MW-11) is more than twice of the EC of the Bolthouse effluent and the chloride concentrations in the downgradient wells are considerably higher than the chloride concentrations in the Bolthouse effluent. Based on the available data, it does not appear that the Bolthouse discharge is the cause of the variable groundwater quality observed in the area.

30. In addition to the 12 first encountered groundwater monitoring wells, the City also includes results from seven groundwater monitoring wells operated by the Kern Sanitation Authority (KSA) that monitor deeper portions of the unconfined aquifer.

Table 9
Kern Sanitation Authority – Groundwater Monitoring Network
Groundwater Results - 16 January 2016

<u>Well</u>	<u>Well Depth</u> <u>feet bgs¹</u>	<u>Depth to Water</u> <u>feet bgs¹</u>	<u>Electrical</u> <u>Conductivity</u> <u>µmhos/cm²</u>	<u>Nitrate as</u> <u>Nitrogen</u> <u>mg/L³</u>	<u>Chloride</u> <u>mg/L³</u>
KSA-1	185	159.16	778	7.4	110
KSA-2	220	175.70	1200	2.0	310
KSA-3	200	151.85	1040	9.8	183
KSA-4	150	---	---	---	---
KSA-5	150	126.48	1650	7.5	270
KSA-6	160	136.94	1000	15	130

1. feet bgs = feet below the ground surface.
2. µmhos/cm = micromhos per centimeter.
3. mg/L = milligrams per liter.

The KSA wells are considerably deeper than the City of Bakersfield wells, and in general the water quality has improved with the depth of the wells. EC and nitrate as nitrogen values are considerably lower than those shown in Table 8. The lone exceptions are the chloride values, which average higher in the KSA wells than the City of Bakersfield wells. KSA-2 is about 1.5 miles east and upgradient of the Limi land application area, and about 2.0 miles north and is crossgradient to upgradient of the Fanucchi land application area, while KSA-5 is about 0.5 miles upgradient of the Fanucchi land application area.

31. Another source of regional groundwater quality data for the area can be found on the Water Quality Portal web site, a cooperative service provided by the United States Geological Survey (USGS), the Environmental Protection Agency, and the National Water Quality Monitoring Council. A review found 38 wells with sample results from 45 monitoring events within five miles of the Nickels land application area. The wells ranged in depth from 24 to 1,957 feet bgs and the date of sample collection ranged from 1949 through 2010. The ranges of the detections of EC, TDS, chloride, and nitrate as nitrogen in the USGS wells are shown in the following table.

Table 10
Regional Groundwater Results

<u>Electrical Conductivity</u> <u>µmhos/cm¹</u>	<u>Total Dissolved Solids</u> <u>mg/L²</u>	<u>Chloride</u> <u>mg/L²</u>	<u>Nitrate as Nitrogen</u> <u>mg/L²</u>
445 - 4,300	280 – 3,060	12 - 810	nd – 25.4

1. µmhos/cm = micromhos per centimeter.
2. mg/L = milligrams per liter.

32. The values indicate a wide range of detections further documenting the spatial variability of the water quality encountered in the region. Of the 38 wells for which sample results were located, 15 of the 38 wells had EC and TDS results exceeding the recommended MCLs of 900 µmhos/cm and 500 mg/L, respectively. The dates of the sampling with elevated salinity results included 1949, 1952, 1953, 1956, 1957 and

1989. The highest EC and TDS values (4,300 $\mu\text{mhos/cm}$ and 3,060 mg/L, respectively) are reported from USGS well 351941118555401 sampled on 13 May 1952 and listed as 353 feet deep. This indicates that groundwater in the region has a long history of elevated salinity constituents that pre-dates the discharge of wastewater from the Bolthouse Facility.

Basin Plan, Beneficial Uses, and Regulatory Considerations

33. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 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. Pursuant to California Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
34. The Facility and the Kirschenmann, Porter and plot 13-2 of the Nickels land application areas are in the Arvin-Wheeler Ridge Hydrologic Area (No. 557.30), and the Limi, Fanucchi, and plots 13-1, 13-3, and 13-4 of the Nickels land application areas are in the Kern Delta Hydrologic Area (No. 557.10). Both the Arvin-Wheeler Ridge Hydrologic Area and the Kern Delta Hydrologic Area are part of the South Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986. Surface drainage is to the southwest with the nearest surface water body being the East Side Canal that is present along the western boundary of the Facility. The beneficial uses of Valley Floor waters as stated in the Basin Plan are domestic supply; agricultural supply; industrial service supply; industrial process supply; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; groundwater recharge; and rare, and threatened, or endangered species. The Kern River is about 5.5 miles northwest of the Facility.
35. The Facility and land application areas are in Detailed Analysis Unit (DAU) Nos. 254 and 258 within the Kern County Basin hydrologic unit. The beneficial uses of underlying groundwater as set forth in the Basin Plan for both DAU 254 and 258 are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply. DAU 254 also has beneficial uses of water contact recreation; non-contact water recreation; and wildlife habitat.
36. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as Municipal to meet the State drinking water maximum contaminant levels (MCLs) specified in 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.

37. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. 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.
38. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until a mechanism to carry salts out of the basin is established. To limit the degradation, the Basin Plan establishes several salt management requirements, including:
 - a. The incremental increase in salt from use and treatment must be controlled to the extent possible. The Tulare Lake Basin Plan effluent limit for EC limits the increase from a point source discharge to a maximum of 500 $\mu\text{mhos/cm}$. When the source water is from more than one source, the EC shall be a weighted average of all sources.
 - b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 $\mu\text{mhos/cm}$, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L. As indicated in Findings 28, 30, and 31, groundwater in wells upgradient of the Facility and land application areas have EC results ranging from below the MCL of 900 $\mu\text{mhos/cm}$ to over 4,000 $\mu\text{mhos/cm}$, and chloride results ranging from 12 mg/L to 810 mg/L. As such, effluent limits for EC and chloride do not apply, but the effluent limit for boron does apply to the discharge.
39. The Basin Plan allows for an exception for food processing industries that exhibit a disproportionate increase in EC in the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids. As shown in Table 2, the EC of the discharge has averaged about 1,300 $\mu\text{mhos/cm}$, but the average TDS is higher at about 1,700 mg/L and the fixed total dissolved solids has averaged about 700 mg/L. The EC being less than the TDS indicates the presence of organic dissolved solids in the discharge and the Discharger qualifies for the Basin Plan EC effluent limit exception.
40. The Basin Plan also allows for an exception to the EC limit for industrial wastewaters when the discharger technically demonstrates that allowing a greater net incremental increase in EC will result in lower mass emissions of salt and in conservation of water, provided that beneficial uses are protected. The September letter from the Discharger addressed the water conservation efforts of Bolthouse Farms indicating it had reduced its water usage and saved some 300 million gallons of irrigation water since 2013.

41. 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.
42. The list of crops in Finding 22 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but it is representative of current and historical agricultural practices in the area.
43. Resolution No. R5-2009-0028 *In support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants* was adopted by the Central Valley Water Board in April 2009 to promote wastewater reuse projects such as the discharge authorized by this Order.
44. The Water Conservation Act of 2009, Senate Bill (SBX7-7), requires 20 percent reduction in statewide water use by 2020 to be achieved through implementation of Best Management Practices (BMPs) and optimization of water reclamation opportunities in the urban, industrial, and agricultural sectors. The proposed project is consistent with these goals.

Antidegradation Analysis

45. 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 high quality groundwater unless it has been shown that:
 - a. 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.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
 - c. The discharger employs best practicable treatment or control (BPTC) to minimize degradation, and
 - d. The degradation is consistent with the maximum benefit to the people of the state.

46. Constituents of concern that, when discharged to the land application areas, have the potential to cause degradation of high quality waters include, in part, organics, inorganics, nutrients, and salts.
- a. **Nitrogen.** For nitrogen, total nitrogen of the discharge averages about 35 mg/L, and nitrogen loading in 2015 ranged from 35 to 235 lbs/ac/yr. Crops grown in 2015 included alfalfa, wheat, and corn that can utilize between 175 to 480 lbs/ac/yr of nitrogen. Nitrogen in the discharge is well managed and the discharge is used as an alternative water source to irrigate crops. The crop nitrogen needs are greater than the amount of nitrogen provided by the discharge. If applied at agronomic rates, it is unlikely that the discharge would degrade the underlying groundwater with respect to nitrogen. Existing regional data indicates nitrate as nitrogen has been present in regional groundwater monitoring wells at concentrations greater than the Primary MCL of 10 mg/L as far back as 1944 indicating nitrate as nitrogen has been an issue in regional groundwater wells for decades.
 - b. **Salinity:** The average EC and chloride of the Bolthouse discharge exceeds the Tulare Lake Basin Plan's salt management requirement that a discharge that may recharge good quality groundwater shall not exceed an EC of 1,000 $\mu\text{mhos/cm}$, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L. However, available data dating back to 1944 shows that water quality in the area is highly variable and results for EC, TDS, and chloride have exceeded salinity water quality objectives since at least 1952. The discharge of the process wastewater does not appear to have adversely affected the quality of the underlying groundwater. However, to ensure the Discharger is evaluating the salinity of its discharge, this Order contains Provision G.13 that requires Bolthouse Farms to prepare a Salinity Management Plan to evaluate and implement salinity reduction measures to the process.
 - c. **Organics:** As described in Findings 13 and 14, application of organic materials (as measured by BOD) at excessive rates can cause anaerobic conditions that result in nuisance odor conditions, dissolution, and leaching of some metals (primarily iron, manganese, and arsenic) to groundwater. However, as discussed in Finding 11, the BOD loading rates of the existing and proposed discharge will be less than 100 lbs/ac/day (averaged 74 lbs/ac/day in 2015) and at such loading rates are unlikely to degrade the underlying groundwater quality.
47. *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.

48. 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:
- a. Risk Category 1: (less than 50 lbs/ac/day; depth to groundwater greater than 5 feet) Indistinguishable from good farming operations with good distribution important.
 - b. Risk Category 2: (less than 100 lbs/ac/day; depth to groundwater greater than 5 feet) Minimal risk of unreasonable groundwater degradation with good distribution more important.
 - c. Risk Category 3: (greater than 100 lbs/ac/day; depth to groundwater greater than 2 feet) Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.

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

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. This Order sets an irrigation cycle average BOD loading rate for the LAAs of 100 lb/acre/day consistent with Risk Category 2 in the *Manual of Good Practice* for discharges using sprinkler application to land with well drained soils.

Treatment and Control Practices

51. The Discharger provides treatment and control for its discharges of wastewater to the land application areas, as required by this Order, treatment and control of the discharge that incorporates:
- Removal of suspended solids and sediment from the waste stream prior to discharge to the existing wastewater storage/distribution pond;
 - Appropriate solids disposal practices;
 - Comprehensive wastewater/effluent monitoring;
 - Wastewater used for irrigation is stored in a lined 1.0 million gallon capacity wastewater storage/distribution pond;

- Sprinkler application of wastewater to the land application areas at agronomic rates;
- Resting periods between wastewater applications;
- Over 2,000 acres available to be used as land application areas;
- Daily inspection of the land application areas during times of wastewater discharge;
- Preparation and implementation of a Salinity Management Plan; and
- Preparation and implementation of a Nutrient Management Plan.

Antidegradation Conclusions

52. This Order establishes terms and conditions to ensure that the authorized discharge from the Bolthouse Facility will not excessively degrade groundwater, contribute to existing pollution, or unreasonably affect present and anticipated future beneficial uses of groundwater.
53. This Order establishes terms and conditions to ensure that the authorized discharge from the Bolthouse Facility will not excessively degrade groundwater, contribute to existing pollution, or unreasonably affect present and anticipated future beneficial uses of groundwater.
54. The provisions of this Order require the Discharger to implement treatment or control measures listed in Finding 51. These Treatment and Control Practices are reflective of BPTC of the discharge.
55. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. The Bolthouse Farms operation provides numerous full time jobs and indirectly provides opportunities for local trucking firms, as well as the industries that produce materials and equipment used for farming the various crops grown on the land application areas and equipment used in the carrot, fruit juice, and salad dressing processing. This Order does authorize limited degradation of groundwater for salinity, but this Order is expected to improve groundwater quality and protect beneficial uses in the future. Any degradation authorized herein is to the maximum benefit to the people of the state.
56. This Order is consistent with the Anti-Degradation Policy since: (a) the Discharger must implement BPTC to minimize degradation; (b) limited degradation is allowed by this Order, but groundwater quality is anticipated to improve and will be protective of

future beneficial uses of groundwater; and (c) the limited degradation is of maximum benefit to people of the State.

Other Regulatory Considerations

57. 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 to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
58. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2B as defined below:
 - a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
 - b. Category B complexity, defined as: "Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."
59. California Code of Regulations, title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. The Facility contains treatment, processing, storage facilities, and wastewater land application areas. Some discharges regulated by this Order are exempt from Title 27 pursuant to a provision that exempts wastewater under specific conditions. This exemption, found at Title 27, section 20090, is described below:

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.

60. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27. The current lined wastewater storage/distribution pond, and land application areas are exempt pursuant to Title 27, section 20090(b) because they are discharges of wastewater to land, and:
 - a. The Central Valley Water Board is issuing WDRs;
 - b. This Order prescribes requirements that will ensure compliance with the Basin Plan; and
 - c. The wastewater discharged to the land application areas does not need to be managed as hazardous waste.
61. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System General Industrial Storm Water Permit for the Plant because all storm water runoff is retained onsite and does not discharge to a water of the United States.
62. Water Code section 13267(b)(1) 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 having discharged or discharging, or who proposes to discharge waste 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.
63. The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2016-0100 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.
64. 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.
65. The action to adopt waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301.

66. On 16 June 2000, Central Valley Water Board, in accordance with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.), adopted an Initial Environmental Study and Negative Declaration for the operation of a carrot processing plant at 7200 East Brundage Lane in Bakersfield in Kern County, with discharge of up to 8.0 mgd to land application areas totaling about 1,450 acres of agricultural land for reuse. The Negative Declaration found that the project would have a less than significant effect on water quality. The Negative Declaration contained Finding 8 that allowed an increase to 12.0 mgd, once the Discharger had demonstrated it had the treatment, storage, and disposal capacity. Finding 8 of the Negative Declaration required the submittal of a new Report of Waste Discharge prior to increasing the flow to 12.0 mgd. The Discharger submitted a 6 February 2003 report addressing the additional storage and land application areas to be used.
67. 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

68. 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.
69. The Discharger 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.
70. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 5-00-150 is rescinded and, pursuant to Water Code sections 13263 and 13267, the W.M. Bolthouse Farms, Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, 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. Bypass of untreated wastes or partially treated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, is prohibited.
4. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
5. Discharge of toxic substances into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted is prohibited.
6. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.
7. Discharge of process wastewater to the domestic wastewater treatment system (septic system) is prohibited.

B. Flow and Effluent Limitations

1. The monthly average daily discharge, measured at EFF-001, shall not exceed 12.0 million gallons.

C. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
2. The discharge shall not cause degradation of any water supply.
3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
6. 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.
7. 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.

8. As a means of discerning compliance with Discharge Specification C.7, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single 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.
9. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
10. 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.
11. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications C.9 and C.10.
12. 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.

13. 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.
14. 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.

D. Groundwater Limitations

Release of waste constituents from any treatment unit, delivery system, storage areas, or Land Application Area associated with the Bolthouse Facility shall not cause or contribute to groundwater containing concentrations of constituents identified below or background quality, whichever is greater.

1. For constituents identified in Title 22, contain constituents in concentrations that exceed either the Primary or Secondary MCLs established therein.
2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

E. Land Application Area Specifications

1. For the purposes of this Order, "land application areas" refers to the discharge areas (Ranches) described in Finding 7.
2. Application of waste constituents to the land application areas shall be at reasonable agronomic rates to preclude creation of a nuisance and unreasonable degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the land application areas, including the nutritive value of organic and chemical fertilizers and of the wastewater and nutrients in applied irrigation water and available in the root zone shall not exceed the annual crop demand.
3. The discharges to the land application areas will not exceed a BOD daily cycle average loading rate of 100 lbs/ac/day at any time. The cycle average includes resting periods between irrigations. Compliance with this limit shall be determined by using the average of the last three months of effluent BOD monitoring results.
4. Crops shall be grown in the land application areas. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize crop uptake of waste constituents. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.

5. The Discharger shall ensure that water, BOD, and nitrogen are applied and distributed uniformly across each land application area field. The Discharger shall implement changes to the irrigation system and/or operational practices as needed to ensure compliance with this requirement.
6. Any irrigation runoff shall be confined to the land application areas and shall not enter any surface water drainage course or storm water drainage system.
7. The perimeter of the land application areas shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
8. The volume of wastewater applied to the land application areas on any single day shall not exceed reasonable agronomic rates based on the vegetation grown, pre-discharge soil moisture conditions, and weather conditions.
9. Hydraulic loading of wastewater and supplemental irrigation water including precipitation shall be at reasonable agronomic rates designed to:
 - a. Maximize crop nutrient uptake;
 - b. Maximize breakdown of organic waste constituents in the root zone; and
 - c. Minimize the percolation of waste constituents below the root zone.
10. The irrigation with wastewater shall be managed to minimize erosion within the land application areas.
11. The land application areas shall be managed to prevent breeding of mosquitoes. In particular:
 - a. There shall be no standing water 48 hours after irrigation ceases;
 - b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
12. No physical connection shall exist between wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduced pressure principle device.
13. The resulting effect of the wastewater discharge on the soil pH shall not exceed the buffering capacity of the soil profile and shall not cause significant mobilization of soil constituents such as iron and manganese.

14. Discharge of storm water runoff from the LAAs to off-site land or surface water drainage courses is prohibited.

F. 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 carrot processing, residual solids means organic food processing byproducts such as culls, pulp, stems, and leaves that will not be subject to treatment prior to disposal or land application.

1. Sludge and solid waste shall be removed from screens, sumps, and ponds 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. 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.
4. 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.

G. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions), which are a part of this Order.
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) R5-2016-0100, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. 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.
4. The Discharger must at all times properly operate and maintain its respective facilities and systems of treatment and control (and related appurtenances) that are

installed or used to achieve compliance with the conditions of this Order. Proper operation and maintenance also include 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 only when the operation is necessary to achieve compliance with the conditions of the Order.

5. All technical reports and work plans required herein 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 a person registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter 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.
7. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
8. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the 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.

9. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.
10. 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.
11. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
12. 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.
13. **By (6 months from the adoption of this order)**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan shall identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan. The Discharger shall implement the plan in accordance with the approved schedule.
14. **By (6 months from the adoption of this order)**, the Discharger shall submit a Nutrient Management Plan for the land application areas for Executive Officer approval. At a minimum the Plan must include procedures for monitoring the land application areas including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or nuisance conditions, a discussion on blending of wastewater and supplemental irrigation water, supporting data and calculations for monthly and annual water and nutrient balances, and

management practices that will ensure wastewater, irrigation water, commercial fertilizers and soil amendments are applied at agronomic rates.

15. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.
16. 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."
17. 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.
18. 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.

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

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 6 December 2016.

Original signed by

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A. Site Location Map
- B. Facility Map
- C. Site Vicinity Map
- D. Land Application Areas - Assessor Parcels List

Monitoring and Reporting Program No. R5-2016-0100
Information Sheet

Standard Provisions (1 March 1991) (separate attachment to the Discharger only)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2016-0100
FOR
WM BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) 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. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *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. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 11.

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

Monitoring Location Name	Monitoring Location Description
EFF-001	Location where a representative sample of the effluent from the concrete lined wastewater retention pond can be obtained prior to discharge to the land application areas.
Limi Well, Porter Well, Nickle Well, East Niles Well	Irrigation wells (named in column to the left) used to provide water to the facility/land application areas and any other wells added to the groundwater supply well network.
Wastewater Settling Ponds and the Storage/Distribution Pond (PND-1) Monitoring	Wastewater settling ponds and the storage/distribution pond and any other wastewater pond added to the disposal system.
Porter, Nickels, Limi, Kirschenmann, and Fanucchi Ranches (Land Application Areas)	Land application areas where the discharge from the facility and any other supplemental water sources (irrigation water, surface water) are applied.
Soil-01 – Soil-06. Background-01 and Background-02.	Locations where representative soil profile samples can be collected from monitoring locations within the land application areas and at least two background soil sampling locations.

EFFLUENT MONITORING (EFF-001)

The Discharger shall monitor its discharge of wastewater at a point (EFF-001) prior to discharge to the land application areas. The samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Wastewater monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Bi-weekly	Electrical Conductivity	umhos/cm	Grab
Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Monthly	Total Suspended Solids	mg/L	24-hour composite
Monthly	Total Dissolved Solids	mg/L	24-hour composite
Monthly	Fixed Dissolved Solids	mg/L	24-hour composite

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u> ¹	<u>Sample Type</u>
Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	24-hour composite
Annually	Boron	mg/L	24-hour composite
Annually	Arsenic	mg/L	24-hour composite
Annually	Manganese	mg/L	24-hour composite
Annually	General Minerals	mg/L ²	24-hour composite

^{1.} mgd = million gallons per day; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter.

^{2.} mg/L or ug/L, as appropriate.

POND MONITORING

Pond monitoring shall include at least the following from the settling ponds and the wastewater storage/distribution pond (PND-01):

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	Freeboard	Feet ¹	Observation

^{1.} To nearest tenth of a foot

Permanent markers (e.g., staff gauges) shall be placed in the storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard.

The Discharger shall inspect the condition of the storage ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the storage pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark green, dull green, yellow, gray, tan, brown, etc.).

GROUNDWATER/SOURCE WATER MONITORING

The wells monitored are actually supply wells. Prior to sampling the wells shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water.

The Discharger shall monitor all wells in its Groundwater Monitoring Network, and any additional wells added in the future, for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u> ¹	<u>Sample Type</u>
Quarterly	pH	pH Units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	Nitrite as Nitrogen	mg/L	Grab
Quarterly	Nitrate as Nitrogen	mg/L	Grab

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u> ¹	<u>Sample Type</u>
Quarterly	Ammonia Nitrogen	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	Total Organic Carbon	mg/L	Grab
Quarterly	Boron	mg/L	Grab
Quarterly	Arsenic	mg/L	Grab
Quarterly	Manganese	mg/L	Grab
Quarterly	General Minerals	mg/L ²	Grab

1. umhos/cm = micromhos per centimeter, mg/L = milligrams per liter
2. mg/L or ug/L, as appropriate.

The Discharger shall maintain its groundwater monitoring well network. If a groundwater monitoring well(s) are dry for more than four consecutive sampling events, the Discharger shall submit a work plan and proposed time schedule to replace the well(s). The well(s) shall be replaced following written Executive Officer approval of the work plan and time schedule.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor the land application areas (the Porter, Nickels, Limi, Kirschenmann, and Fanucchi Ranches) daily when wastewater is being discharged. The volume of the effluent applied will be monitored at EFF-001. The monitoring report shall identify the source and volume of the effluent applied, the specific parcels to which it is applied, the acreage to which it is applied, and the type of crops grown on each parcel. This information shall be submitted as part of the annual monitoring report in addition to a map, which shows the specific parcels that received Bolthouse Farms effluent.

In addition, the Discharger shall perform the following routine monitoring and loading calculations for each discrete irrigation area within the land application areas. If supplemental irrigation water is used, samples shall be collected from its source. The data shall be collected and presented in both a graphical (map) and tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily ¹	Application area	Acres	n/a
Daily ¹	Wastewater flow	Gallons	Metered
Daily ¹	Wastewater loading	Inches/day	Metered
Daily ¹	Supplemental irrigation	Inches/day	Metered
Daily ¹	Precipitation	Inches	Rain gage ²
Monthly	Total Hydraulic loading ³	Inches/acre-month	Calculated
<u>BOD Loading</u> ⁴			
Daily ¹	Day of application	lbs/ac/day	Calculated
Cycle	Cycle average ⁵	lbs/ac/day	Calculated
<u>Nitrogen loading</u> ⁴			
Annual	From wastewater	lbs/ac/yr	Calculated

Annual	From fertilizers	lbs/ac/yr	Calculated
Annual	From supplemental irrigation water	lbs/ac/yr	Calculated

Salt loading⁴

Annual	From wastewater	lbs/ac/yr	Calculated
Annual	From irrigation water	lbs/ac/yr	Calculated

1. When wastewater is applied to the land application areas.
2. National Weather Service or CIMIS data from the nearest weather station is acceptable.
3. Combined loading from wastewater, irrigation water, and precipitation.
4. The BOD, salt, and nitrogen loading rate shall be calculated using the applied volume of wastewater, applied acreage, and average of the three most recent BOD, FDS, and total nitrogen analytical results.
5. A cycle average is the calculated by taking the pounds of BOD applied to the land application area in a given period, divided by the sum of the total days wastewater was applied plus the number of days of rest (no application of wastewater). For example, a 3-day cycle average would be calculated as follows. Effluent is discharged on the first day at a rate of 300 pounds per acre. No discharge occurs on days 2 and 3 (2 days rest). The BOD cycle average is the pounds per acre applied by the discharge (300 pounds) divided by the total number of days (three). The BOD cycle average loading would be 100 lbs per acre.

In addition, the Discharger shall inspect the application areas on a daily basis when wastewater is being applied. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and kept on site.

SOIL MONITORING (Soil-01)

The Discharger shall establish, with the concurrence of Central Valley Water Board staff, representative soil profile monitoring locations within the land application areas and at least two representative background location(s) (i.e., that historically have not received process wastewater). The Discharger shall submit a map to the Central Valley Water Board with the identified sample locations no fewer than **60 days** prior to the first soil sampling event following adoption of this Order. The samples shall be collected and analyzed for the constituents and frequencies specified in the following table:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Annually	Soil pH	pH units	6 feet ¹
Annually	Exchangeable Sodium	Meq/100g ³	6 feet ¹
Annually	Chloride	mg/kg	6 feet ¹
Annually	Nitrate as nitrogen	mg/kg	6 feet ¹
Annually	Total Kjeldahl Nitrogen	mg/kg	2 feet ²

1. Samples to be analyzed shall be collected at depths of 6-inches, 2, 4, and 6 feet below the ground surface (bgs).
2. Samples to be analyzed shall be collected at depths of 6-inches, 2 feet bgs.
3. Meq/100g = mill-equivalents per 100 grams of soil.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports**, which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report: **1 May**

Second Quarter Monitoring Report: **1 August**

Third Quarter Monitoring Report: **1 November**

Fourth Quarter Monitoring Report: **1 February.**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be mailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disc and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5D151194001, Facility Name: Bolthouse Farms Bakersfield Facility, Order: R5-2016-0100

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements, and shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

In addition to the details specified in 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.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. 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 or Central Valley Water Board may notify the Dischargers to electronically submit and upload 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.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting:

1. The results of effluent monitoring specified on pages 2 and 3.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flows from each the wastewater streams.
3. A summary of cycle average BOD loading rates.

Pond Monitoring Reporting

1. The results of the monitoring specified on page 3.

Groundwater Reporting:

1. The results of groundwater monitoring specified on pages 3 and 4.
2. For each monitoring well, a table showing constituent concentrations for at least the last five quarters, up through the current quarter.
3. A map showing the locations of the supply wells and wastewater storage and discharge areas.

Land Application Area Reporting

1. The results of the monitoring and reporting and loading calculations specified on pages 4 and 5.
2. For each month that wastewater is applied to the land application areas, calculation of the monthly hydraulic load for wastewater and supplemental irrigation water in millions of gallons and/or acre-feet to each discrete irrigation area.
3. A summary of the notations made in the land application areas log during each quarter. The entire contents of the log do not need to be submitted.

4. For each month, calculation of the daily BOD cycle average using the BOD results for the month.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Facility Information:

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.
3. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A statement whether the current operation and maintenance manual, sampling plan, nutrient management plan, and contingency plan, reflect the Facility as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

Solids Reporting

1. Annual production of totals solids (excluding trash and recyclables) in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
 - b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
 - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
 - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.

- e. For animal feed, include: the location of the site, and the Order number of any WDRs that regulate it.

Soils Reporting

1. The results of soil monitoring specified on page 5. The analytical results should be presented in tabular form and include depth of sample. If no sample is collected at a specified depth it should be noted in the table along with the reason no sample was collected.
2. A site map showing the location of each sampling point. The map shall also include the locations of all monitoring wells and wastewater storage and/or discharge areas.

Land Application Area Reporting

1. The type of crop(s) grown and the planting and harvest dates.
2. The monthly and annual discharge volumes during the reporting year expressed as million gallons and inches.
3. A monthly balance for the reporting year that includes:
 - a. Monthly average ET_0 (observed evapotranspiration) – Information sources include California Irrigation Management Information System (CIMIS) <http://www.cimis.water.ca.gov/>
 - b. Monthly crop uptake
 - i. Crop water utilization rates are available from a variety of publications available from the local University of California Davis extension office.
 - ii. Irrigation efficiency – Frequently, engineers include a factor for irrigation efficiency such that the application rate is slightly greater than the crop utilization rate. A conservative design does not include this value.
 - c. Monthly average precipitation – this data is available at <http://www.cimis.water.ca.gov/> or <http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmlprcp.html>.
 - d. Monthly average and annual average discharge flow rate.
4. A summary of daily and cycle average BOD loading rates.
5. The total pounds of nitrogen applied to the land application areas from all sources (wastewaters, fertilizers, and irrigation waters) as calculated from the sum of the monthly loading to the land application areas in lbs/ac/yr.

6. The total pounds of FDS that have been applied to the land application areas, as calculated from the sum of the monthly loadings to the land application areas in lbs/ac/yr.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Original signed by

Ordered by: _____
PAMELA C. CREEDON, Executive Officer
6 December 2016

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:
	Alkalinity Chloride Sodium
	Bicarbonate Hardness Sulfate
	Calcium Magnesium TDS
	Carbonate Potassium
	General Minerals analyses shall be accompanied by documentation of cation/anion balance.

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

Waste Discharge to Land

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

INFORMATION SHEET

ORDER NO. R5-2016-0100
BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

(Bolthouse or Discharger) owns and operates a carrot, fruit juice, and salad dressing processing facility (Facility) at 7200 East Brundage Lane in Bakersfield, Kern County. The Facility is regulated by WDRs Order 5-00-150 that originally allowed a discharge of up to 8.0 mgd of carrot processing wastewater by itself, to 1,484 acres of farmland or land application areas. In 2003, Bolthouse increased the land application areas to 2,068 acres and requested a flow increase to 12 million gallons per day (mgd) that was approved by the Central Valley Water Board in August 2003.

Background

The earliest Waste Discharge Requirements in the record are Order 74-20 that allowed for a discharge of 0.20 mgd to the southwest quarter of Section 36, T29S, R28E, MDB&M”(about 180 acres). Order 74-20 was replaced with Waste Discharge Requirements Order 90-011 that allowed a discharge of 1.0 mgd to about 1,400 acres of farmlands in the vicinity of the Facility. Order 90-011 was replaced by the existing Waste Discharge Requirements 5-00-150 that initially allowed a discharge of up to 8 mgd to about 1,500 acres of farmland. On 6 February 2003, Bolthouse submitted a report indicating it had purchased additional acreage to enlarge the land application areas to 2,068 acres of farmland used for the reuse of the wastewater as land application areas and requested the daily maximum flow be increased to 12 mgd.

Aerial photographs of the area from 1952 and 1968 show the current facility location to be vacant, and the property appears to be tilled farmland. A 1992 aerial photograph shows the Bolthouse Facility, but with far fewer buildings than currently are present and the Banducci Ranch area now used for sediment removal and storage to the east is not developed. By 2004, the Facility appears for the most part as it does today.

Existing Facility and Discharge

The Bolthouse Facility processes whole carrots and “short cuts” or baby carrots, premium fruit juice blends, and salad dressing. Wastewater is generated from the processing of the carrots and the washing and cleaning of the processing equipment. Whole carrots are washed using recycled water from the short cuts processing along with fresh water from groundwater supply wells. Wastewater discharged from the whole carrots processing is screened and sent to lined storage and settling ponds to remove sediment. The wastewater is then recirculated back to the conveyance flume and the carrot wash areas. Chlorine dioxide is dosed into the recycled water for oxidation and disinfection. The short cuts are abrasively peeled and the wastewater is screened, recycled through the whole carrot processing area, before being discharged to the lined settling ponds and the lined wastewater storage pond.

The existing Bolthouse Processing Facility itself is on about 120 acres with numerous buildings, equipment storage areas, and parking spaces. Process wastewater is routed to a series of settling ponds, is recirculated for reuse in the Facility, and eventually is used as a

supplemental source of irrigation water to 2,068 acres of nearby farmlands. The Facility operates five to seven days a week year round.

The average results of wastewater monitoring events from January 2011 through December 2015 are presented in Table 1. The first value presented is the average and the range of detections is shown below in parentheses.

Table 1
Bolthouse Effluent Quality

Flow <u>mgd</u>	Electrical Conductivity <u>umhos/cm</u>	Total Dissolved Solids <u>mg/L</u>	Fixed Dissolved Solids <u>mg/L</u>
5.849	1,304	1,764	653
(0.064 - 12.01)	(120 - 2,000)	(770 - 2,400)	(330 - 1,033)

1. umhos/cm = micromhos per centimeter.

2. mg/L = milligrams per liter.

The electrical conductivity (EC) exceeds the EC effluent limit (Discharge Specification B.6) of Order 5-00-150, but the Discharger notes the EC in the discharge has increased due to their water conservation efforts. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2015* contains an exception to the EC effluent limit for industrial dischargers that can show that water conservation efforts have resulted in an overall decrease in the amount of salt discharged. The discharge qualifies for the Basin Plan exception as discussed in greater detail in the Basin Plan, Beneficial Uses, and Regulatory Considerations section.

Bolthouse Farms, Inc.,

The average results of wastewater monitoring events from January 2011 through December 2015 are presented in Table 2. The average is shown first with the range of detections shown in the parentheses below.

Table 2
Bolthouse Effluent Quality

Nitrate as Nitrogen <u>mg/L¹</u>	Total Kjeldahl Nitrogen <u>mg/L¹</u>	Total Nitrogen <u>mg/L¹</u>	Ammonia <u>mg/L¹</u>	Biochemical Oxygen Demand <u>mg/L¹</u>	Total Suspended Solids <u>mg/L¹</u>
3.4	31.2	34.6	2.4	1,983	668
(nd ² - 3.4)	(5 - 91)	(5.0 - 110)	(nd ² - 16)	(190 Bolthouse Farms, Inc., (Bolthouse or Discharger) owns and operates a carrot, fruit	(12 - 3,800)

juice, and -
 3,900)

1. mg/L = milligrams per kilogram.
2. nd = not detected by the laboratory.

Nitrogen loading to the land application areas (including fertilizers) in 2015 ranged from 35 to 235 pounds per acre per year (lbs/ac/yr). Crops grown in 2015 included alfalfa (harvested up to seven times from spring through autumn) and wheat (planted in autumn for harvest the following spring). Bolthouse also grew corn, milo, and teff grass hay that were all planted from late spring through early summer and harvested during the late summer and early autumn months. The uptake of the crops planted and harvested far exceeds the amount of nitrogen added by the application of wastewater.

The daily biochemical oxygen demand (BOD) rates did not exceed the 300 pounds per acre per day (lbs/ac/day) daily loading limit in Order 5-00-150 in 2015. The monthly average BOD loading was less than 100 lbs/ac/day in 11 of 12 months of 2015, with the BOD load in July being 110 lbs/ac/day. Resting periods varied among the various land application parcels, but the cycle average for 2015 was reported to average 74 lbs/ac/day. With over 2,000 acres for land application, the overall loading rates are typically in compliance with the Discharge Specifications of Order 5-00-150 for BOD.

Table 3 presents the average effluent results from January 2011 through December 2015.

Table 3
Bolthouse Effluent Quality

Sodium	Potassium	Sulfate	Chloride	Boron
<u>mg/L</u>	<u>mg/L</u>	<u>mg/L</u>	<u>mg/L</u>	<u>mg/L</u>
158	133	77	218	0.25
(130 - 180)	(26 - 190)	(59 - 94)	(160 - 260)	(0.2 - 0.3)

The reported chloride concentrations exceed the Tulare Lake Basin Plan effluent limit of 175 milligrams per liter (mg/L) for discharges over good quality groundwater. However, regional groundwater results show a wide range of chloride concentrations with chloride results as high as 810 mg/L dating back to 1952, and the supply wells used by Bolthouse do not exceed the chloride limit of 175 mg/L.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan indicates the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man’s activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Central Valley Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 micromhos per centimeter (µmhos/cm) as a measure of the maximum

permissible addition of salt constituents through use. Also, the Basin Plan limits discharges to areas that may recharge good quality groundwater to no more than an EC of 1,000 $\mu\text{mhos/cm}$; a chloride content of 175 mg/L; or a boron content of 1.0 mg/L.

An exception to this EC limit may be permitted for industrial sources when the discharger technically demonstrates that allowing a greater net incremental increase in EC will result in lower mass emissions of salt and in conservation of water, provided that beneficial uses are protected. Bolthouse has reduced the water usage at the Facility by 13 percent (300,000,000 gallons) since 2013, which has reduced the amount of salt discharged to the land application areas by reducing their water usage. The Bolthouse discharge also qualifies for the other effluent EC exception in the Tulare Lake Basin Plan for industrial dischargers. A review of the data in Table 1 shows total dissolved solids (TDS) averaging over 1,700 mg/L, while the EC averages about 1,300 $\mu\text{mhos/cm}$. The TDS being higher than the EC indicates the discharge is high in dissolved organics and the discharge likely qualifies for the EC effluent limit exception in the Tulare Lake Basin Plan for industrial discharges that exhibit a disproportionate increase in EC of the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids from the raw food product. The TDS results are elevated, but the fixed dissolved solids (FDS) are less than half of the TDS results. To ensure the Discharger evaluates the salinity of the discharge, these waste discharge requirements include Provision G.13 that requires Bolthouse to prepare a Salinity Management plan which will allow Bolthouse to review methods of reducing the salt load in its discharge

Source Water

Bolthouse obtains its source water from three supply wells and uses it in the processing activities and for irrigation purposes of its crops grown on the land application areas. Bolthouse sometimes uses the City of Bakersfield's "East Niles" water system. Of the three Bolthouse supply wells, Bolthouse primarily uses the Limi and Porter wells as a water source and only uses the Nickel and East Niles wells on an as-needed basis. The averages for EC, TDS, nitrate as nitrogen, and chloride since 2006 are shown in Table 4.

Table 4
Bolthouse Source Water Quality

Well	Electrical Conductivity	Total Dissolved Solids	Nitrate as Nitrogen	Chloride
	$\mu\text{mhos/cm}^1$	mg/L^2	mg/L^2	mg/L^2
Limi	444	277	0.7	24
Porter	699	438	1.4	89
Nickel	1021	666	6.2	165
East Niles	883	558	5.1	111
Limits ³	900/1600	500/1000	10	250/500

1. $\mu\text{mhos/cm}$ = micromhos per centimeter.

2. mg/L = milligrams per liter.

3. The limits shown for EC, TDS, and chloride are Secondary maximum contaminant levels (MCLs) with the "Recommended" limit listed first (900/1600), and the "Upper" limit shown second (900/1600). The nitrate limit is the primary MCL.

The results from the Limi and Porter wells are less than water quality objectives for the constituents listed. The TDS in both the Nickel and East Niles wells exceed the “recommended” Secondary MCL of 500 mg/L, but are less than the “upper” Secondary MCL of 1,000 mg/L. The EC result from the Nickel well exceeds the recommended Secondary MCL of 900 μ hos/cm, but is less than the upper Secondary MCL of 1,600 μ hos/cm. The Limi and Porter wells are the primary water supply wells for the Facility, with the Nickel and East Niles systems only used on an as needed basis.

Groundwater Conditions

Bolthouse does not have a groundwater monitoring well network that monitors first encountered groundwater, but depth to water information is available from the DWR and other nearby regulated sites. The depth to water in the vicinity of the Facility is approximately 180 feet above mean sea level, which corresponds to a depth of about 250 feet below the ground surface (bgs), according to information in *Lines of Equal Elevation of Water in Wells in Unconfined Aquifer*, published by DWR, Spring 2004. However, shallow perched groundwater is present in the area to the west/southwest. The regional flow of the unconfined aquifer is generally to the east, subject to local influences of irrigation well pumping, seepage of excess irrigation water, and groundwater recharge.

The City of Bakersfield (City) operates wastewater treatment plant (WWTP) No.2 about 2.5 miles west of the Facility and the land application areas extend about 10 miles south to just past Bear Mountain Boulevard. The City monitors 12 first encountered groundwater monitoring wells and in January 2016, the depth to first encountered groundwater ranged from about 18 to 84 feet bgs.

The results of the first quarter 2016 groundwater monitoring are shown in Table 5 and depict the variable nature of the shallow perched groundwater.

Table 5

City of Bakersfield – WWTP No. 2 - Perched Groundwater Results

<u>Well</u>	Electrical Conductivity <u>μhos/cm¹</u>	Nitrate as Nitrogen <u>mg/L²</u>	Chloride <u>mg/L²</u>
MW-1	1230	17	78
MW-2	1580	24	190
MW-3	967	2.5	83
MW-4	1370	6.0	130
MW-5	---	---	---
MW-6	1420	9.3	160
MW-7	1280	8.1	130
MW-8	1030	0.45	90
MW-9	2960	36	260
MW-10	2320	0.9	220
MW-11	3200	16	250
MW-12	1720	8.4	280

1. $\mu\text{mhos/cm}$ = micromhos per centimeter.
2. mg/L = milligrams per liter.

The data in Table 5 illustrates the highly variable nature of the water quality in the region. MW-3 and MW-8 are set right in among the City’s wastewater ponds and have the lowest EC and nitrate results shown indicating the WWTP No. 2 is not the cause of the elevated EC results observed in the region. MW-2 is upgradient of MW-7, but it has higher EC, chloride, and nitrate as nitrogen results than in downgradient MW-7. MW-9 is about a half mile south of the Fanucchi land application areas with MW-11 another two miles south of MW-9. Both wells contain EC and nitrate as nitrogen at levels that are elevated and exceed water quality objectives. However, MW-10 is the well set as an upgradient well and the results from MW-10 also exceed the Basin Plan water quality objectives for EC and chloride. Additionally, the EC in all three of these wells (MW-9 through MW-11) is more than twice of the EC of the Bolthouse effluent and the chloride concentrations in the downgradient wells are considerably higher than the chloride concentrations in the Bolthouse effluent. Based on the available data, the depth to groundwater and the quality of the underlying groundwater is highly variable with various constituents exceeding applicable water quality objectives for salinity and nitrate as nitrogen dating back to the 1940’s and 1950’s.

Regional groundwater data is found on the United States Geological Survey (USGS) Water Quality Portal web site. A review found 38 wells with sample results within 5 miles of the Nickels land application area. The wells ranged in depth from 24 to 1,957 feet bgs and the date of sample collection ranged from 1949 through 2010. The ranges of the detections of EC, TDS, chloride, and nitrate as nitrogen in the USGS wells are shown in the following table. The range of detections for the Regional Groundwater Wells within 5 miles of the land application areas is shown in the following table.

Table 6

Regional Groundwater Results

EC	TDS	Chloride	Nitrate
<u>$\mu\text{mhos/cm}$</u>	<u>mg/L</u>	<u>mg/L</u>	<u>mg/L</u>
445 - 4,300	280 – 3,060	12 - 810	0.45 – 114

The values further indicate the wide range of detections and the spatial variability of the water quality encountered in the region. Oil field exploration has occurred in the region for nearly 100 years and water quality has long been shown to be highly variable. The highest EC and TDS values (4,300 $\mu\text{mhos/cm}$ and 3,060 mg/L , respectively) are reported from USGS well 351941118555401 sampled on 13 May 1952 and listed as 353 feet deep. This indicates that groundwater in the region has had a long history of elevated salinity constituents in groundwater that predates the discharge of wastewater from the Bolthouse Facility.

Compliance History

A review of the record for the Bakersfield Bolthouse files indicates that Bolthouse currently submits self-monitoring reports that are complete and on time. The 2015 Annual Monitoring Report submitted on 2 February 2016 provides the following information.

- The daily average discharge in 2016 was 5.5 mgd with a daily maximum of 11.4 mgd (12.0 mgd limit).
- Weekly pH readings were within the range of 6.5 to 8.5 s.u. during 43 of 52 weekly sampling events with the nine exceedances ranging from 8.7 to 9.4 s.u. The average pH was 7.9 s.u.
- No reports of objectionable odors were received.
- The daily BOD rates did not exceed the 300 lbs/ac/day daily loading limit in Order 5-00-150 in 2015. The monthly average BOD loading was less than 100 lbs/ac/day in 11 of 12 months of 2015, with the BOD load in July being 110 lbs/ac/day. Resting periods varied among the various land application parcels, but the cycle average for 2015 was reported to average 74 lbs/ac/day.
- Nitrogen loading to the land application areas (includes fertilizers) in 2015 ranged from 35 to 235 lbs/ac/yr. Crops grown in 2015 included alfalfa (harvested up to seven times from spring through autumn) and wheat (planted in autumn for harvest the following spring). Bolthouse also grew corn, milo, and teff grass hay that were all planted from late spring through early summer and harvested during the late summer and early autumn months. The uptake of the crops planted and harvested far exceeds the amount of nitrogen added by the application of wastewater.
- The average EC of the source water (564 $\mu\text{mhos/cm}$) in 2015 plus 500 $\mu\text{mhos/cm}$ results in an effluent limit of 1,064 $\mu\text{mhos/cm}$. The average EC of the discharge was 1,300 $\mu\text{mhos/cm}$ for all 52 weeks, indicating the discharge exceeded the EC limit in 2015.

Antidegradation

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 will not unreasonably affect present and anticipated future beneficial uses.
- b. 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
- c. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.
- d. The degradation is consistent with the maximum benefit to the people of the State.

The EC exceeds the limit of Order 5-00-150, but as previously discussed the Discharger qualifies for two EC effluent limit exceptions contained within the Tulare Lake Basin Plan, Second Edition, revised January 2015. Even with the effluent limit exceptions for EC, these WDRs include Provision G.13 that requires Bolthouse to prepare a Salinity Management plan which will allow Bolthouse to review methods of reducing the salt load in its discharge.

The reported chloride concentrations in the discharge exceed the Tulare Lake Basin Plan effluent limit of 175 mg/L for discharges over good quality groundwater. However, regional groundwater results show a wide range of chloride concentrations with chloride results as high as 810 mg/L dating back to 1952, and the supply wells used by Bolthouse do not exceed the chloride limit of 175 mg/L.

Nitrogen in the discharge is well managed and the discharge is used as an alternative water source to irrigate crops. Nitrogen loading from the discharge ranged from 35 to 235 lbs/ac/yr and the crops grown in 2015 included alfalfa, wheat, and corn that can utilize between 175 to 480 lbs/ac/yr of nitrogen. The crop nitrogen needs are greater than the amount of nitrogen provided by the discharge. If applied at agronomic rates, it is unlikely that the discharge would degrade the underlying groundwater with respect to nitrogen.

The average BOD concentration in the effluent has averaged 1,983 mg/L since January 2011 and the BOD loading rates in 2015 were less than the existing BOD loading limit of 300 lbs/ac/day. Resting periods vary depending upon the land application area used and the type of crops grown in the land application area, but the cycle average for 2015 was reported to average 74 lbs/ac/day. In order to ensure that the discharge will not cause or contribute to groundwater degradation/pollution, this Order includes Provision G.14 that requires the Discharger to prepare a Nutrient and Wastewater Management Plan. With the current BOD loading rates and if the discharge is applied at agronomic rates as required by this Order, the discharge should not degrade the underlying groundwater.

Degradation of groundwater by some of the typical waste constituents released with discharge from a food processing facility after effective source reduction is consistent with maximum benefit to the people of the State. Bolthouse contributes to the economic prosperity of the region by directly providing numerous full time jobs and it provides incomes for local trucking firms, and provides a tax base for local and county governments. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason to accommodate growth and groundwater degradation provided terms of the Basin Plan are met.

California Environmental Quality Act

On 16 June 2000, Central Valley Water Board, in accordance with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.), adopted an Initial Environmental Study and Negative Declaration for the operation of a carrot processing plant at 7200 East Brundage Lane in Bakersfield in Kern County, with discharge of up to 8.0 mgd to land application areas totaling about 1,450 acres of agricultural land for reuse. The

Negative Declaration found that the project would have a less than significant effect on water quality. The Negative Declaration contained Finding 8 that allowed an increase to 12.0 mgd, once the Discharger had demonstrated it had the treatment, storage, and disposal capacity. Finding 8 of the Negative Declaration required the submittal of a new Report of Waste Discharge prior to increasing the flow to 12.0 mgd. The Discharger submitted a 6 February 2003 report addressing the additional storage and capacity.

Title 27

Title 27 of the California Code of Regulations, section 20005 et seq (Title 27) contains regulations to address certain discharges to land.

Unless exempt, release of designated waste is subject to full containment pursuant to Title 27 requirements. Title 27 Section 20090(b) exempts discharges of wastewater to land as follows:

- “(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 regional water board has issued waste discharge requirements, or waived such issuance;
 - (2) the discharge is in compliance with the applicable basin plan; and
 - (3) 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.”

Discharge of Bolthouse wastewaters to the land application areas authorized herein complies with Title 27 section 20090(b). The discharge of carrot, fruit juice, and salad dressing processing wastewater to the lined settling and storage ponds, and then to the 2,050 acres that comprise the land application area meet the requirements of Title 27 section 20090(b).

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

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

Proposed Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The proposed Order would prohibit discharge to surface waters and water drainage courses.

The proposed Order would prescribe discharge specifications that limit the nitrogen loading to agronomic rates for the crops grown.

The proposed Order requires monitoring of the discharge for pH, BOD, EC, TDS, FDS, total Kjeldahl nitrogen, nitrite as nitrogen, nitrate as nitrogen, ammonia, total nitrogen, and general minerals. The Order also requires daily inspections of the land application areas.

The proposed Order would require the Discharger to submit and implement Salinity and Nutrient Management Plans.

The proposed Order would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

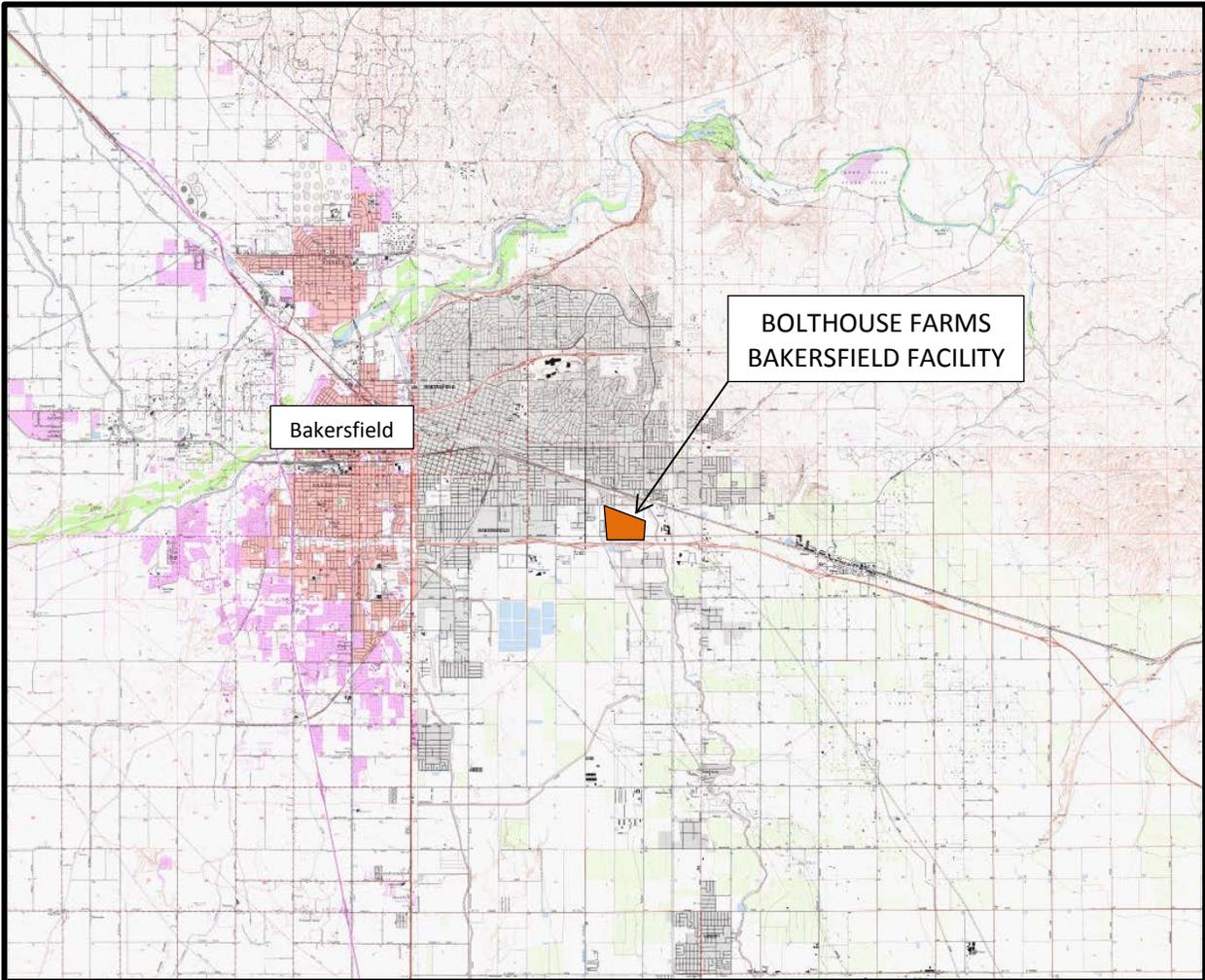
Monitoring Requirements

Section 13267 of the CWC authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes effluent, groundwater, source water, soil, and land application area monitoring. The monitoring is necessary to evaluate the extent of the potential degradation from the discharge.

Reopener

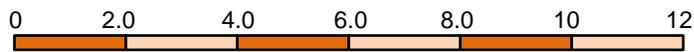
The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order would set limitations based on the information 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.



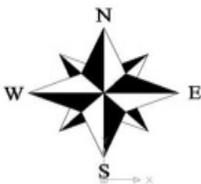
SITE LOCATION MAP

ORDER R5-2016-0100
WASTE DISCHARGE REQUIREMENTS

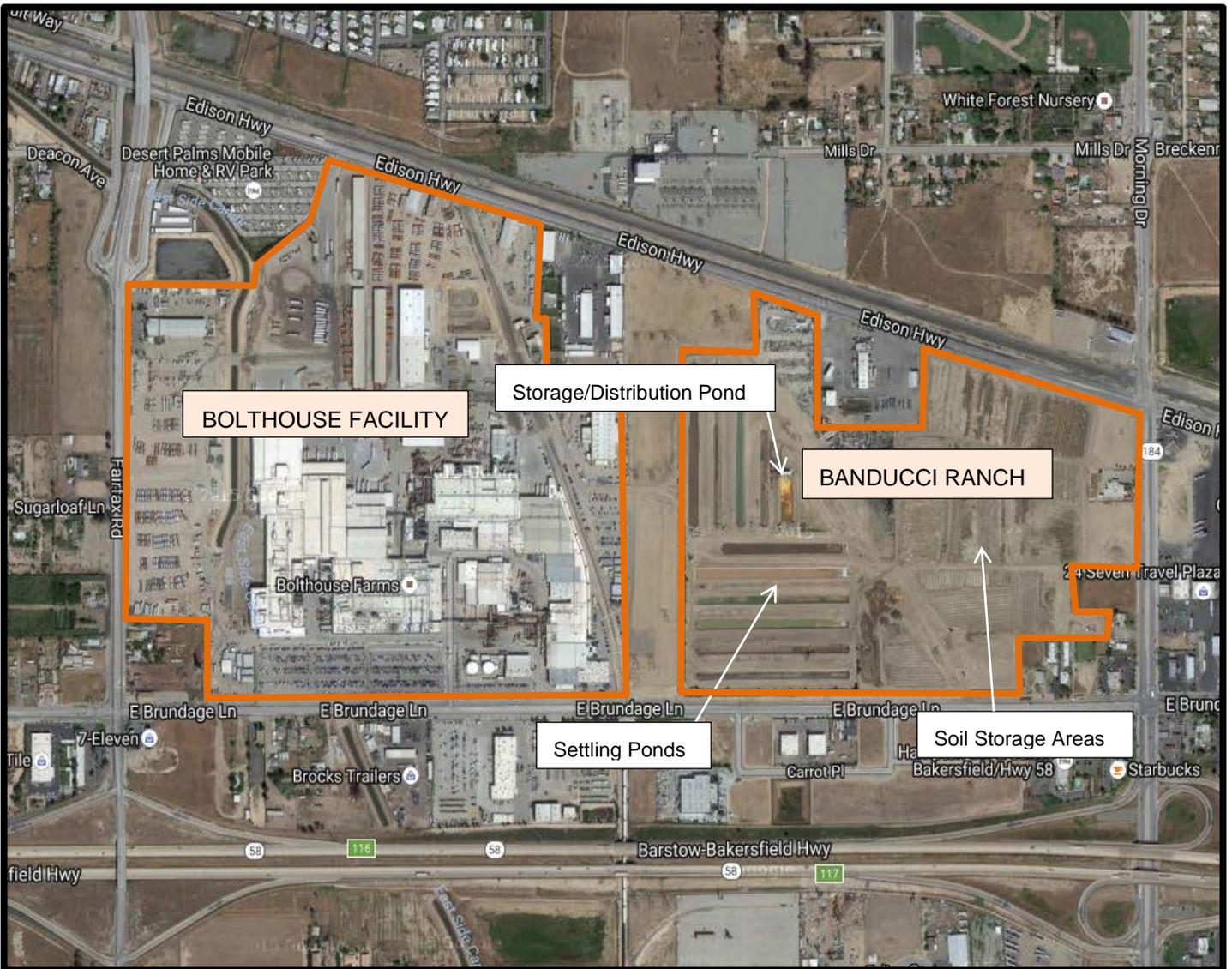
FOR
WM BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY



Approximate Scale in Miles



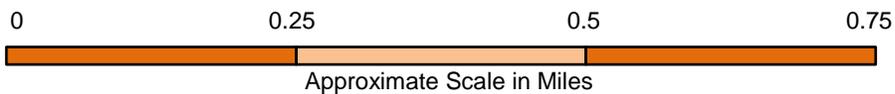
ATTACHMENT A

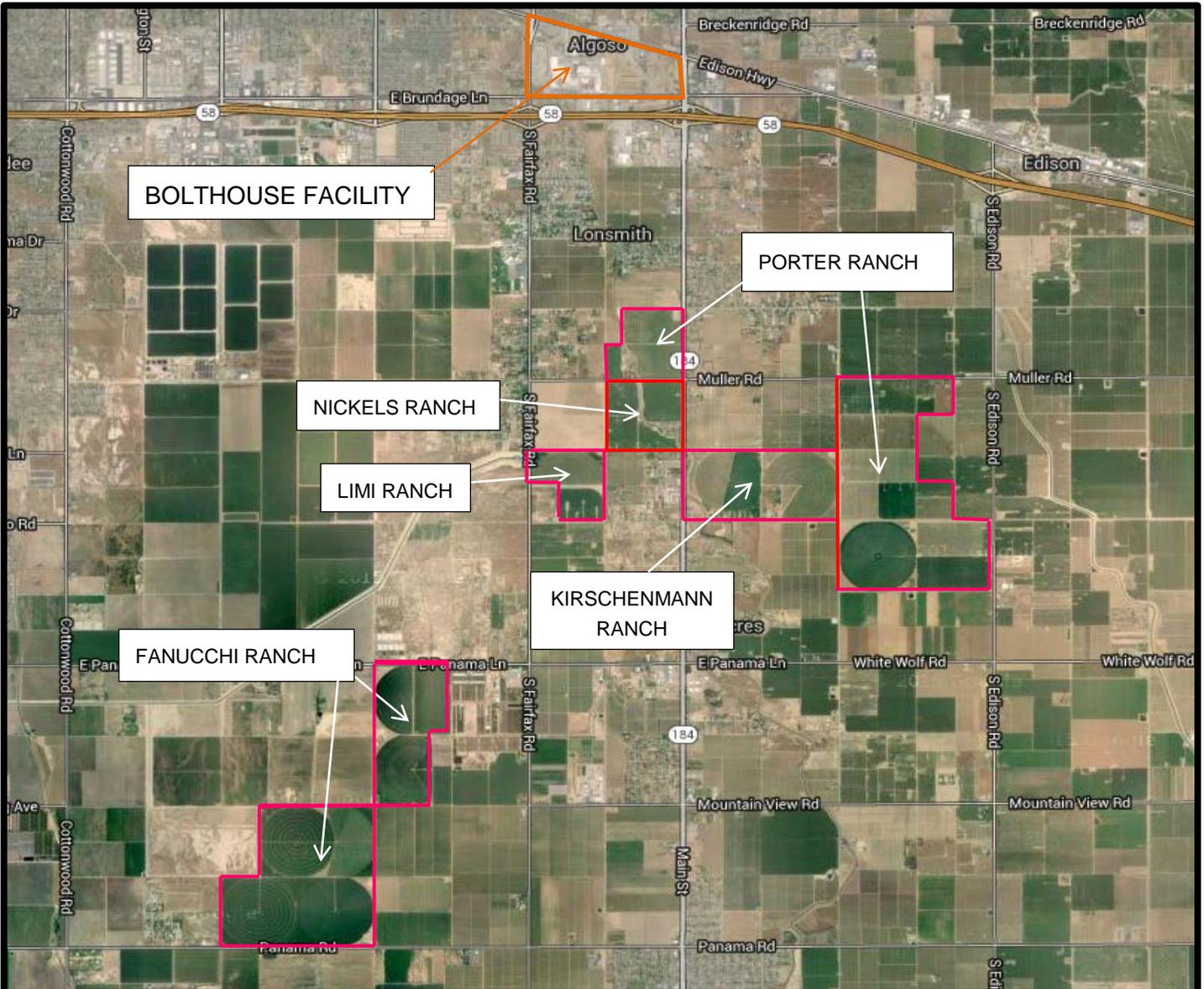


FACILITY MAP

ORDER R5-2016-0100
WASTE DISCHARGE REQUIREMENTS

FOR
WM BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

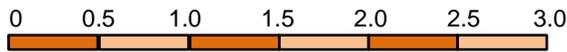




SITE VICINITY MAP

ORDER R5-2016-0100
 WASTE DISCHARGE REQUIREMENTS

FOR
 WM BOLTHOUSE FARMS, INC.
 BAKERSFIELD PROCESSING FACILITY
 KERN COUNTY



Approximate Scale in Miles



<u>PARCEL NUMBER</u>	<u>ACREAGE</u>
173-292-05	113.28
174-013-11	78.29
174-020-06	3.93
174-020-09	40.07
174-020-12	46.36
174-020-14	5.92
174-020-15	29.61
174-020-16	4.29
174-020-17	18.01
174-050-02	6.65
174-050-03	12.18
174-050-04	12.20
174-050-05	13.33
174-050-10	6.63
174-170-09	79.21
174-170-36	119.91
174-180-02	471.92
174-180-03	40.23
174-180-04	41.18
174-180-09	1.27
177-250-08	77.27
177-250-11	40.37
177-250-18	62.95
177-250-21	73.62
177-250-27	5.46
177-250-28	6.47
177-250-29	9.26
177-270-01	34.77
177-270-02	4.92
177-270-08	38.65
177-270-18	235.15
177-290-01	19.92
178-010-31	315.36
Total	2068.64

LAND APPLICATION AREAS - ASSESSOR PARCEL NUMBERS

ORDER R5-2016-0100
WASTE DISCHARGE REQUIREMENTS

FOR
WM BOLTHOUSE FARMS, INC.
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

ATTACHMENT D